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pulp which is at present admitted free of duty. It is claimed that pulp made from bamboo can replace wood pulp for all purposes in the manufacture of paper, and some of the principal manufacturing concerns have accepted this proposal subject to the condition that sufficient time is given them to equip themselves for the manufacture of wood pulp.

4. The Board will be glad to receive written representations from all Public Bodies, Associations, firms or persons who desire to be heard regarding the grant of protection to the Paper industry.

Oral evidence will be taken as follows:—

At Bombay and Poona between the 23rd September and the 29th October.

At Madras between the 1st and the 14th November.

At Rangoon between the 19th November and the 2nd December.

At Calcutta between the 5th and the 23rd December.

5. Oral evidence will not be taken at Madras and Rangoon unless a sufficient number of witnesses is forthcoming to make it worth while for the Board to visit these places. Although the evidence taken in the Board's enquiries into the Cement, Printer's Ink and Magnesium Chloride industries was published at the end of July, only one or two applications for taking oral evidence at Madras or Rangoon has yet been received. It is essential that all who desire to give oral evidence at either place should inform the Board by the 30th September, so that the programme may be definitely fixed and should submit their written representations as soon thereafter as possible, and in any case not later than the 15th October. If the visits to Madras and Rangoon are abandoned, oral evidence will be taken at Calcutta in November instead of in December. It is hoped that all who desire to give oral evidence in Bombay regarding the paper industry will inform the Board not later than the 15th September and will send their written representations as soon as possible thereafter. The Board will arrange dates for the oral examination of witnesses from the Western side of India either at Bombay in the last week of September or at Poona in October.

All who desire to give oral evidence at Calcutta should inform the Board not later than the 15th October and should send their written representations by that date. All other written representations should reach the Board by 31st October at latest.

6. All requests for oral examinations should be addressed to the Secretary to the Board, Town Hall, Bombay, and should be despatched so as to arrive on or after the 8th September, the date on which the Board's office will open at Bombay.

## THE PAPER INDUSTRY.

### No. I.—QUESTIONNAIRE FOR APPLICANTS FOR PROTECTION.

#### I.—INTRODUCTORY.

1. When was the firm which you represent established? Is it a public or private registered Company, or is it an unregistered firm?

2. To what extent is the capital invested in your firm held by Indians? How many Indians are Directors? How many Indians (if any) form part of the superior management?

3. Does your firm undertake the manufacture of paper only, or of pulp only, or of both paper and pulp? If both pulp and paper are manufactured, is pulp manufactured for sale or only to the extent necessary to meet your own requirements?

4. At what date did the mill (or mills) under the control of your firm commence to manufacture?

5. What is the full capacity of your mills as at present equipped for the manufacture of (a) pulp and (b) paper?

6. What has been the actual output of the mill for each year since manufacture commenced of—

(a) paper, if your production of pulp is limited to your own requirement,

(b) pulp, if pulp is manufactured for sale?

7. Where is your mill situated? Do you consider it is advantageously situated in respect of—

(a) vicinity to the areas from which your principal raw materials are drawn\*;

(b) vicinity to the coalfields or other sources of power or fuel;

(c) vicinity to an important market;

(d) other considerations such as the existence of an abundant labour supply?

What do you consider the most important factor in selecting the site of a paper mill in India?

8. Enumerate the various kinds of paper which are manufactured in your mill. Taking the average of the last five years, what is the percentage of the total output which each kind represents?

9. What are the principal trade classifications of paper? Would the kinds of paper you manufacture be classified as (a) good, (b) medium or (c) inferior? In view of the raw materials obtainable in India and the Indian demand, for the manufacture of what classes of paper are the conditions most favourable?

10. Do you manufacture a larger variety of papers than a single manufacturer in Western countries commonly does? If so, please explain the reasons. Do you consider the Indian manufacturer is at a disadvantage in this respect?

11. What process do you use for the manufacture of pulp?

## II.—RAW MATERIALS.

### A.—Primary.

The term " Primary raw materials " covers the various products (*e.g.*, grass, bamboos, rags, etc.) from which the fibre is obtained. Some of the questions in this section relate also to the pulp which is purchased and not manufactured in the mill.

12. What are the primary raw materials used in your mill?

13. What are your annual requirements of each of the primary raw materials—

(a) according to your present rate of output, which should be stated;

(b) according to the rate of output equivalent to the full capacity of the plant?

14. What quantity of each of the primary raw materials is required for the production of one ton of unbleached pulp?

15. What quantity of unbleached pulp is required for the production of one ton of finished paper?

16. Can you give an approximate estimate of the total quantity available of your primary raw materials, either for India as a whole or for a particular Province?

17. From what area or areas does the factory draw its main supplies of the primary raw materials, and at what distance from the factory are they situated? If possible a map should be given showing the site of the mill and the areas from which supplies are drawn.

18. How is the raw material collected and by what means is it transported from the field or forest to the mill? If more than one means of transportation is employed, specify the distance covered by each such means.

19. What royalty (if any) per ton for raw materials is payable to Government or to private persons?

20. Please give the cost per ton delivered at the mill, of the primary raw material (or materials) for the year 1913-14 and the last complete year for which figures are available, divided under the following heads:—

(1) Royalty (if any)

(2) Labour employed on extraction and collection



(3) Freight from field to mill by

road  
rail  
river  
sea  
other

(4) Miscellaneous charges.

21. What are the terms of your concession (or concessions) for the primary raw material? (A copy of the lease or other document in which the concession is embodied should be given.) Do you consider these terms favourable? If not, in what respect do you consider them unfavourable?

22. Have you found the supply of the raw material constant in respect of quality, or have you noticed, or do you expect, any deterioration? In the latter case, the causes to which the deterioration is ascribable should be explained.

23. Has the supply of the primary raw materials been found constant in respect of quantity, or has it been found necessary to draw supplies from greater and greater distances as time goes on? If so, do you consider the fact is due to—

- (a) an increase in the output of the factory, or
- (b) the establishment of other mills which compete for supplies of the same raw material, or
- (c) a gradual diminution of the supplies within the areas from which they are taken, or
- (c) any other cause?

24. If, as suggested in the last question, it has been found necessary to draw supplies from new areas, please supply a statement giving for each of the last twenty years the total quantity taken from each area. If possible, the cost per ton delivered at the mill of the supplies from each area should be given for each year.

25. Do you consider that your mill is assured of a sufficient supply of the primary raw materials for a reasonably long period? What measures have been taken to secure this object?

26. If *sabai* grass is one of the primary raw materials used in your mill, do you agree with the following opinion expressed by Mr. R. S. Pearson before the Fiscal Commission?

“Dealing with supplies, I do not quite agree that they [*i.e.*, the manufacturers] were correct in their statement. They have hardly got sufficient grass to work up to their full capacity. They could not increase 5,000 tons on their present output if they were asked to do so. In other words, they have not got the raw material. If they want to expand, it might be done by importing sulphide spruce or by using other new materials. Another point is that during the last ten or twelve years there has been intensive cropping

and the grass has deteriorated considerably. That is the reason they are now going all so far afield to get their supplies, the fields nearer being very much depleted. It is, therefore, questionable whether the pulp industry which has been going on for 40 or 50 years could really continue, even if the paper-making industry did not expand at all. I know that they have now to go to Hoshangabad, Central India, Sambalpore, etc., in Bihar and Orissa and the Punjab. Raw material is not easily available and they are paying Rs. 2 per maund for it landed in Calcutta."

27. Would it be possible to increase the supply of *sabai* grass materially by opening out new areas without the cost of transport becoming prohibitive? If not, does the expansion of the industry depend on the use of other materials?

28. What has been your experience of the use of bamboos for the manufacture of pulp?

29. Do you consider that the existence of large forests of bamboos gives this country an advantage in the manufacture of pulp as compared with other countries?

30. So far as India is concerned, how does the bamboo compare with *sabai* and other grasses in respect of—

- (a) the quantities available,
- (b) continuity of supply,
- (c) accessibility of supply,
- (d) cheapness,
- (e) quality of the pulp manufactured?

What are the primary classes of bamboo you consider suitable for the manufacture of pulp?

31. Apart from *sabai* grass, are there any other grasses in India which are suitable for pulp manufacture? How do they compare with *sabai* grass in respect of the points mentioned in question 30?

32. Are rags available for your purposes in sufficient quantities and at a reasonable cost?

33. Have you experienced any difficulty in obtaining forest leases or concessions for the collection of your primary raw materials? If so, what was the nature of the difficulty?

34. Do you find it necessary to import any quantity of:—

- (a) your primary raw materials,
- (b) foreign pulp?

If so, are the importations required merely to supplement the domestic supplies or for the production of special kinds of paper? From what countries do you import, and at what prices? If possible please give:—

- (i) f.o.b. price per ton (in sterling),
- (ii) port of importation,
- (iii) freight, insurance, etc.

- (iv) landing charges,
- (v) transport charges to mill,
- (vi) customs duty (if any).

35. Do you get any special freight rate by sea, river or rail for your primary raw materials? Do you consider you are at any disadvantage in this respect?

### *B.—Auxiliary.*

The term "auxiliary raw materials" covers lime, all chemicals and dyes, and consumable stores and generally all raw materials other than the primary raw materials and purchased pulp.

36. What are the chief auxiliary raw materials used in your mill, and what are your total requirements of each in one year?

37. What quantity of each of the chief auxiliary raw materials is required—

- (a) per ton of unbleached pulp, if you are manufacturing pulp for sale?
- (b) per ton of finished paper, if you are manufacturing paper?

38. Which of the chief auxiliary raw materials are—

- A. Imported from abroad?
- B. Manufactured and purchased in India?
- C. Manufactured by you from other materials?

In case A, please give—

- (a) country of origin,
- (b) f.o.b. price (in sterling),
- (c) port of importation,
- (d) freight, insurance, etc.,
- (e) landing charges,
- (f) transport charges to mill,
- (g) customs duty,

In case B, please give—

- (a) market price,
- (b) transport and other charges,

and state where and by whom the materials are manufactured.

In case C, please give the particulars asked for under A or B for the materials purchased, and the cost of manufacture in your mill according to the customary unit of production.

39. Which of the materials mentioned in the answer to question 36, if not already manufactured in India,

- (a) are likely to be manufactured?
- (b) are not likely to be manufactured?

Please state the reasons for the opinion given.

## III.—LABOUR.

A.—*Field labour.*

40. How many labourers are employed in extracting and collecting your primary raw materials in the field or forest? Please give for the year 1913-14 and the last complete year for which figures are available:—

(a) the total wages bill for such labour,

(b) the average wages per man.

The increases in the rates of wages between the two years should be stated, and the dates when they were given.

41. Have you any difficulty in obtaining such labour? If so, what?

42. Is the labour indigenous, or has it to be imported from other parts of India? Whether the one or the other, is it always available in sufficient quantities?

43. Does this labour require any special training? If so, is it readily trained?

B.—*Mill labour.*

44. Do the processes of manufacture require much expert supervision involving the employment of skilled labour imported from abroad?

45. What number of imported labourers are employed at present and what would be the number required if the factory were worked to full capacity?

46. What progress has been made since the factory was established in the substitution of Indian for imported labour? Is it anticipated that eventually the employment of imported labour will be unnecessary? What facilities are given to Indian workmen to acquire training in skilled work or for training apprentices?

47. How do the rates of wages paid to imported workmen compare with the rates paid for similar work in other countries?

48. What is the total number of Indian workmen employed and what are the average rates of wages of the different classes?

49. Please give for the year 1913-14 and the last complete year for which figures are available:—

(a) the total wages bill for Indian mill labour,

(b) the average wages per man in the different classes.

The increases in the rates of wages between the two years should be stated and the dates when they were given.

50. Is the Indian labour force sufficient? Is it drawn from the vicinity of the factory or from other parts of India?

51. Has it been found that the Indian labourer improves with training? How does his efficiency compare with that of workmen in Western countries employed on similar work?

52. What arrangements have you made for housing your labour and for promoting its welfare in other directions?

#### IV.—POWER (INCLUDING FUEL).

53. Is the power used in the factory derived from electricity, or steam, or from some other source?

54. If electric power is used, from what source is it obtained and what is the cost per unit? How does the cost compare with the rates obtained elsewhere in India and in other countries?

55. If steam power is used, is coal the fuel employed? If not, what is the fuel? Is the latter available in sufficient quantities?

56. What is the total quantity of fuel required per unit of output whether for power production or for other purposes, for (i) pulp and (ii) paper?

If you purchase electric current from an outside supply, please give also the number of units required per unit of output in addition to the fuel used.

57. From what distance is the fuel brought, and what is the free-on-truck price in the case of coal, and in the case of other fuel at the source of supply? And what is the cost of transport per ton in each case? If fuel is purchased locally, what is the price per ton delivered at the mill?

58. Do you own or control your own sources of supply of fuel? If so, how many years' supply have you of the kind of fuel used by you?

59. If your fuel is wood, have you obtained any concession from the Government or other person? What is the royalty payable, and what are the conditions of the concession? (Supply a copy of your concession.)

#### V.—MARKET.

##### A.—For paper.

60. What is the total Indian production of paper (excluding hand-made paper) so far as it can be ascertained or estimated for the following periods:—

1909-10.

1910-11.

1911-12.

1912-13.

1913-14.

Average of the last five pre-war years.

1920-21.

1921-22.

1922-23.

1923-24.

Average of the four post-war years.

61. What do you estimate is the total Indian demand for—

- (a) paper of all kinds;
- (b) such kinds of paper as are, or are likely to be, manufactured in India?

62. Is it likely that the Indian demand will substantially increase in the near future? If so, what are the reasons for your belief?

63. In what parts of India are your principal markets situated, and what are the distances which separate them from the mill?

64. Are there any markets in India in which, owing to their distance from the ports, you are more easily able to compete against the foreign manufacturer? If so, please state which these markets are, and the approximate demand in each.

65. Do you consider that the export of paper from India to any foreign countries is probable? If so, to what countries and what kinds of paper? Can you form any estimate of the quantities which India might eventually be able to export?

66. Is the paper manufactured by you purchased by (a) Government and (b) Public bodies, such as Municipalities and Port Trusts? If so, please state the extent of their purchases and the prices paid during—

- (i) the war period,
- (ii) each of the last five years.

Were the prices received by you during the war the market prices then prevailing?

67. Is the paper manufactured by you consumed by newspapers? If so, what is the extent of their demand? If not, what are the reasons?

#### *B.—For pulp.*

The questions in this section are intended mainly for those firms which manufacture pulp for sale, or are likely to do so.

68. Do you consider that the manufacture of pulp by firms in India for sale, and not for consumption in their own paper mills, is likely to establish itself and develop?

69. Please state the quantities of pulp (if any) which you have sold in each of the last ten years.

70. Do you ascribe the present importations of foreign pulp to the inadequacy of the domestic supply of raw materials, or to the unsuitability of pulp made from Indian materials for certain kinds of papers? To what extent do you consider that the present importations of pulp could be replaced by pulp produced in India?

71. What do you estimate is (a) the present, (b) the possible domestic market for India pulp? For what kinds of pulp is there a market in India at present?

72. Do you consider that the export of pulp from India to any foreign countries is probable? If so, to what countries and what kinds of pulp? Can you form any estimate of the quantities India might eventually be able to export?

## VI.—FOREIGN COMPETITION.

### *Paper.*

Separate questions have not been framed with regard to foreign competition in pulp. The questions in this section indicate the points which are considered important, and in so far as they are relevant, *mutatis mutandis*, to the conditions in the pulp industry, the Board would be glad to have the observations of the firms which manufacture pulp for sale.

73. Which are the foreign countries from which competition in the Indian markets is keenest?

74. Is the competition keener in some kinds or qualities of paper than in others? If so, please specify these kinds and qualities.

75. From what raw materials are the kinds of paper made which are imported into India and compete with the paper manufactured by you?

76. Please state in respect of those kinds of paper which form the bulk of your output—

(i) The prices at which imported paper has entered the country and been sold during:—

(a) 1912, 1913 and 1914,

(b) 1917 and 1918,

(c) 1921-22, 1922-23 and 1923-24.

(ii) The prices realised by you for the same kinds.

If possible the f.o.b. price (in sterling) of imported paper should be given and the following items shown separately:—

Freight.

Insurance and trade charges.

Customs duty.

Landing charges.

If this is not possible, then state the c.i.f. price *plus* Customs duty and landing charges.

77. From what sources is information obtainable as to the prices at which imported paper enters the country? How far do you consider the information obtained from these sources reliable?

78. How far are the quotations in the Trade Journals in accord with the prices at which transactions actually take place? To what extent do such quotations form the basis of the terms on which you yourself do business? Are the prices at which paper is actually exported appreciably below the home prices quoted in foreign Trade

Journals? If so, by what percentage approximately should the quoted price be reduced?

79. Have you any reason to suppose that prices at which foreign producers sell for export to India are unremunerative, *i.e.*, below the cost of production, or leaving only a small margin of profit to the producer? If so, please state fully your reasons and the evidence on which you rely.

80. In which of the Indian markets is foreign competition keenest?

81. To what causes do you attribute the low prices at which foreign paper has entered India since the war? How far do you consider these causes permanent or temporary?

82. Please compare the freight you have to pay to reach your markets in India with the total freights—sea and rail—payable on imports to the same markets.

83. Compare the Railway freight paid by importers from the ports to selected up-country markets and the Railway freights paid on the produce of your mill to the same markets.

*N.B.*—What is desired is concrete instances giving the name of the port, the names of the up-country stations, the distances, rates per maund per mile, etc.

84. Have any instances recently come to your notice in which Continental paper has been re-exported from the United Kingdom as British manufactures? If so, please give the evidence on which you rely, and state whether you ascribe the fact to depreciated exchanges or to other causes.

85. Do you consider that, as compared with the foreign manufacturer, the Indian manufacturer is at a disadvantage in all or any of the following points—

- (a) the cost of plant and machinery,
- (b) the cost of expert labour,
- (c) the cost or efficiency of ordinary labour,
- (d) the collection and transport of the primary raw materials,
- (e) the cost of auxiliary raw materials and consumable stores,
- (f) freights on finished goods,
- (g) the maintenance of stocks of spare parts,
- (h) customs duty on imported materials.
- (i) the raising of capital.

Where possible definite figures should be given, *e.g.*, comparing the cost of plant and machinery erected in India with the corresponding cost in Western countries, or comparing the wages of imported expert workmen in India with the wages they would draw in their own countries. If there are "seasonal" difficulties in connection with the collection and transport of the primary raw materials these should be explained.

86. Which of the disadvantages mentioned in your answer to question 85 do you regard as permanent and which as temporary?



For what period in your opinion are the temporary disadvantages likely to operate?

#### VII.—EQUIPMENT.

87. Do you consider that your mill is sufficiently large as an economic unit of production to ensure economy? What in your opinion is the smallest unit of production which can be operated economically under present-day conditions?

88. Does the manufacture of (a) pulp and (b) paper require the use of elaborate and expensive machinery?

89. What percentage of your total capital outlay has been incurred on plant and machinery?

90. Give a brief description of your plant and machinery, stating the number and makes of the principal machines operated, and the dates on which they were first brought into use.

91. Do you consider your machinery and other equipment sufficiently up-to-date and efficient to enable you to compete successfully against the foreign manufacturer?

92. Is it a fact that during, and since, the war many improvements have been effected in pulp and paper-making processes and machinery?

93. Have you, since 1914, adopted any new processes of manufacture, or have you installed new plant and machinery in replacement of, or in addition to, the old plant? If so, give a brief description of them and state whether the results have fulfilled the expectations entertained.

94. Do you contemplate either:—

(a) any important replacement of the existing plant in your mill, or

(b) any extension of the plant by the addition of new machinery?

If so, please give particulars.

95. What parts of the machinery, if any, are made in India?

#### VIII.—CAPITAL ACCOUNT.

96. What is the block value of your property, as it stood in your books at the end of the last complete year for which figures are available, under the following heads—

- (a) Leases and concessions.
- (b) Lands.
- (c) Buildings.
- (d) Plant and Machinery.
- (e) Other miscellaneous assets.

97. Do the figures given in answer to question 96 represent the actual cost of the various assets, or their value after depreciation has been written off? In the latter case, please state the total amount written off for depreciation since manufacture commenced, and in the former case the total of the depreciation fund (if any) which has been accumulated.

98. Apart from any question of an increase in the replacement cost of plant and machinery due to a general rise in the price level, are the sums actually set aside for depreciation since manufacture commenced equal to, greater than, or less than, the sums which ought to have been set aside according to the rates of depreciation which you consider suitable? (See Question 116.)

99. What do you estimate would be the present-day cost under the heads (a) buildings, and (b) plant and machinery, of erecting a mill having the same output as your present mill? How does the figure compare with the block value of your present mill under the same heads, and would the operating cost of a new mill established now be greater or smaller than yours?

100. Give brief particulars of the sums spent on the purchase of plant and machinery in each of the years 1917 to 1924, and the rate of exchange at which funds were remitted.

101. What is the total (a) authorized, (b) subscribed, (c) paid-up capital of the Company? How is it divided between Preference, Ordinary and Deferred shares?

102. At what rate of interest is the dividend payable on the Preference shares? Are these shares entitled to cumulative dividends? If so, state the dates on which they were first entitled to rank for dividends and whether any dividends are in arrears.

103. Under what conditions do the Deferred shares participate in the profits of the Company?

104. Please prepare a statement showing for each year since the establishment of the Company—

- (a) The amount of the paid-up share capital (Preference, Ordinary and Deferred) ranking for dividend,
- (b) The actual amounts distributed as dividends on each class of capital, and
- (c) The percentage on the paid-up share capital of each class which the dividend represented.

105. What is the average rate of dividend on the Ordinary shares for the full period?

106. What is the amount of the debenture loans (if any) raised by the Company? At what dates were they issued, and what is the rate of interest payable? If any period has been fixed for the redemption of the debenture loan, it should be stated. Similarly, if a debenture sinking fund has been established, the annual rate of contribution should be given.

107. What is the amount of the Reserve Fund (if any) created by the Company? Has this amount been accumulated from surplus profits, or from other sources, *e.g.*, by the issue of shares at a premium?

108. What additional capital (if any) would it be necessary to raise in order to carry out any scheme of replacement or extension of plant which the Company contemplate?

#### IX.—COST OF PRODUCTION.

The cost of production falls under two heads:—

- (a) Works costs, and
- (b) Overhead charges.

The latter head—overhead charges—includes:—

- (i) Interest on working capital.
- (ii) Depreciation.
- (iii) Head office expenses and Agents' commission.

The head "Works Costs" covers all other expenditure on the production of pulp or paper. The dividends on share capital are not included in the cost of production, nor is the interest on debenture and other loans in so far as the sums so raised have been devoted to fixed capital expenditure.

#### (a) WORKS COSTS.

109. Please fill up the five Forms annexed to the questionnaire regarding Works Costs.

The following explanations may be useful:—

- (a) The Board are anxious to have as full information as possible regarding the cost of production, but they recognise the difficulty which manufacturers may feel in disclosing to the public the details of their practice and their works costs. Great stress was laid on the importance of publicity in paragraph 303 of the Fiscal Commission's Report, and the Board also have explained the views they hold in paragraph 41 of their Third Report on the Grant of Protection to the Steel Industry. It rests with the manufacturers themselves to decide what information can be given publicly, and nothing will be published which the witness desires to be treated as confidential. At the same time, the Board cannot base their recommendations merely on confidential information. The publication of the details of the works costs of each firm may not be essential because the Board may be able by comparison of the various figures submitted to arrive at a standard or average figure for each item. But it is very

desirable that the total of the works costs should be disclosed in all cases.

- (b) The five Forms in which it is desired that the figures should be compiled have been drawn up in order that the figures given by different firms may be comparable. In Form I the actual expenditure of the year under the various heads should be shown, whereas in the other four forms it is the cost per unit of output that is desired. Forms II, III and IV are concerned with the three stages of the manufacture of paper from the raw materials. The final product of the first stage (unbleached pulp) becomes the raw material of the next, and similarly the final product of the second stage (bleached pulp) becomes the raw material of the third. It is hoped that the manufacturers will be able to furnish statements of Works Costs divided over the three stages in this way, but if the system of accounting renders this difficult, the second stage may be omitted and only Forms II and IV filled up. Some of the heads included in all the forms cannot be assigned to one stage rather than another except by some system of allocation, and the percentage of the total expenditure under such heads allocated to each stage should be given. Form V should be filled up by the firms which manufacture their own chemicals, or some of them.
- (c) The years for which figures have been asked for are 1913-14, 1921-22, 1922-23 and 1923-24. If, however, for any reason 1913-14 is not regarded as typical of the pre-war period, the figures of an earlier year may be taken. For the post-war period, the figures of the last three complete years for which figures are available should be taken.
- (d) The figure given against primary raw materials, auxiliary raw materials, or purchased pulp should be the cost delivered at the mill and will include the cost of all labour employed in collection or transport. The cost of such labour therefore is necessarily excluded from the item "Labour" in the forms. Similarly in Form III the cost of manufactured unbleached pulp should be the cost per ton given in Statement II multiplied by the quantity required to secure an output of one ton of bleached pulp. The same explanation applies, *mutatis mutandis*, to Statement IV. The cost above materials at each stage includes only the costs actually incurred at that stage or, if the expenditure is not directly incurred at one stage rather than another, then the share of such expenditure determined by the system of allocation.

- (e) If at any stage of the process of manufacture materials are recovered and can be used again, the credits taken for such recoveries should be entered in the forms, and the manner in which such credits are taken explained.
- (f) In Forms I to V, Power and Fuel are shown as one item, but it is preferable (if possible) that they should be shown separately.

110. Was the works cost increased in any of the years for which figures have been given owing to the fact that the mill was working at less than its full capacity? If so, which were the items principally affected? To what extent would they probably have been reduced if a full output had been obtained?

111. Do you regard the works cost of the last year for which figures have been given as abnormally high for any other reason? If possible, furnish an estimate of the works cost for some future year on the assumption that—

- (a) conditions are normal,
- (b) an output is obtained equivalent to the full capacity of the plant.

112. Have you adopted a system of cost accounting? If so, will you place before the Board, for examination and return, your cost sheets for the last complete year for which they have been prepared?

113. Are you in a position to furnish the Board with information as to the works costs of pulp and paper in any competing country for any year since the war?

#### (b) OVERHEAD CHARGES.

##### (i) Depreciation.

114. What are the rates of depreciation allowed by the Income-tax authorities? Do you consider that, in calculating the cost of production of pulp and paper, these rates of depreciation are suitable? If not, what rates do you suggest, and why?

115. What is the sum required annually for depreciation at Income-tax rates on the total block account—

- (a) if the assets are valued at cost,
- (b) if the assets are taken at their value after deducting all depreciation written off up-to-date?

The depreciation should be shown separately for:—

Buildings.

Plant and machinery in continuous operation.

Other plant and machinery.

Other assets.

If you consider that rates other than the Income-tax rates should be adopted, please calculate the sums required annually for depreciation at these rates also.

116. Taking the figures given by you in answer to question 99 as the present-day cost of the buildings and machinery required for a mill having the same output as your present mill, calculate the sum required annually for depreciation at Income-tax rates and at the rates you consider should be adopted if you think the Income-tax rates are unsuitable.

117. Taking the total amount of depreciation to be written off according to the various methods given in questions 115 and 116, what is the incidence per ton of finished paper (or pulp, if only pulp is manufactured by you):—

- (a) according to the present output of the mill (which should be stated),
- (b) according to the output equivalent to the full capacity of the plant?

*(ii) Working Capital.*

118. What is the working capital which the Company requires—

- (i) according to its present output, and
- (ii) according to the output equivalent to its full capacity?

119. Is the Company able to provide all the working capital it requires from share and debenture capital, or is it necessary to borrow additional capital for this purpose?

120. If additional working capital has to be borrowed, what is the amount borrowed and the rate of interest payable?

121. Compare the working capital with the cost of one month's output (works cost only, excluding overhead charges).

122. What is the average value of the stocks of finished goods held by the Company? What period normally elapses between production and payment?

123. Do the Company find it necessary to hold large stocks of coal or raw materials? If so, the average value of the stocks held should be stated.

*(iii) Agents' Commission and Head Office expenses.*

124. Has the Company a head office other than the office of the local management? Is it under the control of a firm of Managing Agents?

125. If the answer to (a) is in the affirmative, state:—

- (i) the annual amount of the head office expenses,
- (ii) the Agents' commission.

126. How is the amount of the Agents' commission determined?

127. What is the cost of:—

- (i) head office expenses,
- (ii) Agents' commission,

per ton of finished paper (or pulp, if only pulp is manufactured) according to:—

- (i) the present output;
- (ii) the output equivalent to the full capacity of the plant?

#### X.—MANUFACTURER'S PROFITS.

128. What rate of dividend do you consider a fair return on Ordinary and Deferred shares?

129. If your Company contemplated the establishment of a new paper mill, or the purchase of new machinery for the existing mill—whether by way of extension or replacement—what rates of interest do you consider it would be necessary to offer on (a) Preference shares and (b) Debentures in order to attract capital, assuming that the profits made in the industry showed a substantial margin after providing the interest on the existing shares or debentures?

130. If it were decided to issue Ordinary shares, what do you consider would be the minimum probable return which would be likely to attract investors?

131. What is the incidence per ton of paper (or pulp, if paper is not manufactured by you) of:—

- (a) the fair return on the Ordinary and Deferred shares as given in answer to question 128,
- (b) the full dividends on the paid-up Preference shares,
- (c) the full interest on the debentures in so far as the proceeds of the debentures have been devoted to fixed capital expenditure and not used as working capital?

*N.B.*—The figure should be given both on the present rate of output and the output equivalent to the full capacity of the plant.

#### XI.—CLAIM FOR PROTECTION.

132. In paragraph 97 of their Report, the Fiscal Commission laid down three conditions which in ordinary cases ought to be satisfied by industries claiming protection. Do you consider that those conditions are satisfied in the case of the paper industry the pulp industry? And in particular:—

- A. Do you claim that the industry possesses natural advantages, such as an abundant supply of raw materials, cheap power, a sufficient supply of labour or a large home market?
- B. Do you claim that, without the help of protection, the industry is not likely to develop at all or is not likely to develop so rapidly as is desirable in the interests of the country?

C. Do you claim that the industry will eventually be able to face world competition without protection?

These conditions have been approved by the Government of India and by the Legislative Assembly, and it is therefore of great importance to ascertain whether they are satisfied. If you consider that the paper industry fulfills these conditions, the reasons for your opinion should be fully explained.

133. Do you claim that the paper industry satisfies either or both of the conditions mentioned in paragraph 98 of the Fiscal Commission's Report, viz.—

- (a) That the industry is one in which the advantages of large scale production can be achieved, and that increasing output would mean increasing economy of production?
- (b) That it is probable that in course of time the whole needs of the country could be supplied by the home production?

134. Do you consider that the paper industry is of importance on national grounds and therefore deserves protection apart from economic considerations?

135. Do you consider that there are any features of the industry which make it peculiarly suitable to Indian economic conditions?

136. Do you claim that protective duties should be imposed on paper of all kinds or only on such kinds as compete with Indian products? In the latter case, please specify clearly the kinds of paper on which you desire that protective duties should be imposed. Can these kinds be readily distinguished for Customs purposes from other kinds?

137. What special measures (if any) do you suggest to safeguard paper or pulp industries against underselling by reason of:—

- (a) depreciated exchanges,
- (b) subsidized freights,
- (c) any cause other than a reduction in the foreign cost?

138. What is the amount of protection the industry receives at present owing to—

- (a) the existing Customs duties,
- (b) transport charges between the country of production and the port of entry, i.e., freight, insurance, trade charges and landing charges?

139. What is the amount of the protection which you consider necessary?

N.B.—The reasons for proposing the particular rate recommended should be explained.



140. The paper industry has been in existence in India for a number of years. How is it that the industry is still in need of protection?

141. Protection has been claimed both for finished paper and for pulp. Do you consider that there is any conflict between these two claims, and, if so, how do you propose that they should be reconciled? From the national point of view which do you consider the more important?



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## FORM I.

*Statement showing the total expenditure incurred on the production of paper pulp during certain years.*

(See question 109.)

	1913-14.	1921-22.	1922-23.	1923-24.
(1) Primary raw materials . . . .				
(2) Purchased pulp . . . . .				
(3) Auxiliary raw materials . . . .				
(4) Mill labour . . . . .				
(5) Power and fuel . . . . .				
(6) Ordinary current repairs and maintenance of buildings, plant and machinery.				
(7) General services, supervision and local office charges.				
(8) Miscellaneous, e.g., rent, municipal taxes, insurance, etc.				
(9) Any other single item not enumerated above which amounts to 5 per cent. or more of the total expenditure.				
Total				
Total production of paper (or pulp, if paper is not manufactured) for the year.				

## FORM II.

*Statement showing the works cost per ton of unbleached pulp.*

(See question 109.)

	1913-14.	1921-22.	1922-23.	1923-24.
(1) Primary raw materials . . . .				
(2) Auxiliary raw materials . . . .				
(3) Mill labour . . . . .				
(4) Power and fuel . . . . .				
(5) Ordinary current repairs and maintenance of buildings, plant and machinery.				
(6) General services, supervision and local office charges.				
(7) Miscellaneous, e.g., rent, municipal taxes, insurance, etc.				
(8) Any other single item not enumerated above which amounts to 5 per cent. or more of the total expenditure.				
Total . . . . .				
Credit for materials recovered (if any) . . . . .				
Nett total . . . . .				
Total production of unbleached pulp for the year.				

## FORM III.

*Statement showing the works cost per ton of bleached pulp.*

(See question 109.)

	1913-14.	1921-22.	1922-23.	1923-24.
(1) Manufactured unbleached pulp .				
(2) Purchased unbleached pulp . .				
(3) Auxiliary raw materials . . .				
(4) Mill labour . . . . .				
(5) Power and fuel . . . . .				
(6) Ordinary current repairs and maintenance of buildings, plant and machinery.				
(7) General services, supervision and local office charges.				
(8) Miscellaneous, e.g., rent, municipal taxes, insurance, etc.				
(9) Any other single item not enumerated above which amounts to 5 per cent. or more of the total expenditure.				
Total .				
Credit for materials recovered (if any) .				
Nett total .				
Total production of bleached pulp for the year .				

## FORM IV.

*Statement showing the works cost per ton of finished paper.*

(See question 109.)

	1913-14.	1921-22.	1922-23.	1923-24.
(1) Manufactured bleached pulp .				
(2) Purchased bleached pulp . .				
(3) Auxiliary raw materials . .				
(4) Mill labour . . . . .				
(5) Power and fuel . . . . .				
(6) Ordinary current repairs and maintenance of buildings, plant and machinery.				
(7) General services, supervision and local office charges.				
(8) Miscellaneous, <i>e.g.</i> , rent, municipal taxes, insurance, etc.				
(9) Any other single item not enumerated above which amounts to 5 per cent. or more of the total expenditure.				
Total				
Credit for materials recovered (if any) .				
Nett total .				
Total production of finished paper for the year.				

## FORM V.

*Statement showing the works cost per ton of manufacturing certain chemicals\* in the mill.*

(See question 109.)

	1913-14.	1921-22.	1922-23.	1923-24.
(1) Materials . . . . .				
(2) Mill labour . . . . .				
(3) Power and fuel . . . . .				
(4) Ordinary current repairs, and maintenance of buildings, plant and machinery.				
(5) General services, supervision and local office charges.				
(6) Miscellaneous, e.g., rent, municipal taxes, insurance, etc.				
(7) Any other single item not enumerated above which amounts to 5 per cent. or more of the total expenditure.				
Total				
Credit for materials recovered (if any) .				
Nett total .				
Total production of† . . . . . for the year.				

\* A separate form will be used for each chemical manufactured.

† Fill in the name of the chemical.

## No. II.—QUESTIONNAIRE FOR LOCAL GOVERNMENTS.

(Letter, dated the 1st May 1924, to all Local Governments.)

I am directed to invite a reference to the Resolution of the Government of India in the Commerce Department, No. 38-T., dated the 10th April, remitting to the Tariff Board for enquiry the case for the protection of the Paper industry.

2. The Board are anxious to collect as early as possible all available information concerning the existing conditions relating to the manufacture of machine-made paper and paper pulp and the prospects of the future development of the industry in your Province.

3. I am accordingly to request that you will be so good as to furnish the Board with detailed information on the following points:—

A. What further research has been made by the Department of Industries in your Province regarding—

- (1) the existence, quantity and suitability of grass, bamboo or other forest materials for the manufacture of pulp and paper;
- (2) the proximity and accessibility of the source of supply of these materials;
- (3) the quantity, kind and cost of fuel available;
- (4) the available quantity, location and cost of lime;
- (5) the available supply of labour for the mill and the wages which the workmen would receive;
- (6) (a) suitable sites for the location of paper mills;
- (b) whether any mills have so far been erected in your Province and, if so, whether any of them have been located on any of the sites selected by Mr. Pearson, Economist of the Forest Research Institute, Dehra Dun, and referred to in his "Note on the utilization of bamboo for the manufacture of paper pulp" (1913).

B. (1) (a) What is the amount of royalty levied?

(b) Have any concessions for extracting or collecting the necessary materials been granted by the Local Government?

(c) What are the conditions governing the concessions (if any) which have already been granted; and what conditions are likely to govern the grant of them in future?

(2) Whether there is any local sentiment against the grant of such concessions, and, if so, whether your Government will be able to conciliate this by the prospect of the economic development of the provincial resources for the paper industry.

C. What are the conditions of transport and what is the cost of freight by road, river, rail or sea—whichever method or methods would be necessary?

D. What is the extent of the local demand for machine-made paper?

E. What stage has the industry reached in your Province.

I am further to request that, if possible, maps illustrating your replies to Questions A (2), A (4) and A (6) above may accompany the replies.

4. The Board would be glad to receive your reply to this letter before the end of May.

## Witness No. 1.

## Indian Paper Maker's Association, Calcutta.

## A.—WRITTEN.

*Statement I.—Copy of Representation of Indian Paper Maker's Association, dated 15th June 1923, to the Government of India, Department of Commerce.*

I am directed to address you on the subject of a proposed special protective tariff for the paper-making industry in India.

2. The paper mill industry has been established in this country for nearly sixty years, but its expansion has been small compared with that of the cotton mill or jute mill industry both of which found a footing in the country at about the same period. It is true that the consumption of paper in India has not attained high proportions and is certainly low per head of population; but it is well-known that the quantity of paper imported annually exceeds the output of the Indian Mills. Thus one of the first questions in connection with this appeal must naturally be whether the industry is one which is economically sound. Perhaps the readiest answer to this is to be found in the fact that, although Europe and America have developed a very highly organised and financially strong woodpulp industry, paper of Indian manufacture and of Indian materials still holds its place in the Indian market after many years of fierce competition. The Indian industry is to-day re-organising itself for a continuance of the struggle. It will take some time to recover from the effects of the recent slump, aggravated as these were by the enormous quantities of paper imported by speculators in expectation of continued high rates of exchange and subsequently thrown upon the market at prices far below the cost of manufacture. Yet it may nevertheless be affirmed that the Indian industry suffers from no permanent inherent disadvantage, and, given a period of security from the attack of competition abroad, there is no doubt that it will not only develop in such a way as to be able to defy outside competition but will also assume an important position in the ranks of the world's producers of pulp and paper.

3. For a proper appreciation of the conditions surrounding the Indian industry it is perhaps advisable to recall that it was introduced at a time when the world's increasing demand for paper combined with great scarcity in the supply of cotton rags, then the staple raw material of the trade, compelled paper makers to look for, and to find, new materials in the shape of tropical and semi-tropical grasses. The requirements of a large section of the trade were met by the discovery that Esparto grass from Spain and Northern Africa could be utilised; and the successful results obtained encouraged enterprise in India. Rapid development took place in India between 1877 and 1892, but the gradual rise of the woodpulp industry put a stop to further progress, and shifted the focus of interest for paper-makers from tropical regions to those of Scandinavia and North America. Favoured by apparently inexhaustible supplies of cheap timber in these countries, and assisted by their higher industrial development, the new woodpulp industry rapidly attained enormous proportions, and woodpulp took a pre-eminent position as a paper-making material. In Great Britain the existing paper mills offered a convenient market for the new raw material produced in Sweden and Norway. In other countries the paper industry underwent great expansion, new mills being set down adjacent to, or in conjunction with woodpulp factories. Thus not only were existing demands met, but fresh and increasing requirements were overtaken with such rapidity that paper-makers were soon compelled to seek overseas



markets. "Dumping" inevitably followed, and in India, particularly in the decade prior to the War, the local mills were hard put to it to maintain their existence in the face of this form of competition.

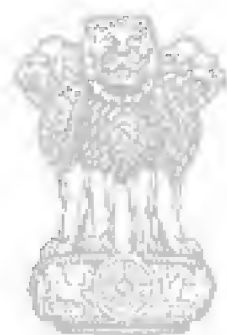
4. Owing to the recent tremendous slump in trade this "dumping" has been resumed, and the Indian mills find themselves in a more difficult situation than ever, owing to the way in which their resources were taxed to meet the exigencies of the Indian, and other outside demand during the War period. Heavy demands now fall to be met for "extraordinary upholding" and the replacement and removal of machinery worked at unduly high pressure during the critical period when it was impossible to maintain previous standards of efficiency and everything had to be sacrificed for the sake of output.

5. Enough has been said regarding the great weight which is carried by the woodpulp section of the paper trade which still maintains a dominating position. It remains now to point to the change which is taking place in this respect. The very rapidity which attended the development of the woodpulp industry has caused the gravest anxiety among those engaged in the manufacture of paper; for the wholesale devastation of forests which it has brought about has limited the prospective supplies. Fears of a woodpulp famine have been expressed from time to time, and the scare which took place towards the end of 1919 and in 1920, when prices of pulp soared to hitherto undreamed of heights, is too recent, and was of too serious a nature to need more than passing mention. Such scares, however excessive and extreme in their violence, nevertheless point to a real danger which can only be averted by the judicious fostering and development of resources such as those possessed by this country. They serve moreover to give point to our claim that, given practical assistance at the present juncture, a strong and prosperous industry can be built up in this country. The 15 per cent. import duty which is now enforced is of considerable assistance to the industry. But experience seems to show that it will need to be largely increased to more nearly an approximate figure of 33½ per cent., as was mentioned before the Fiscal Commission, in order to give the trade the full protection that it requires against foreign "dumped" papers.

6. It is hardly necessary to point out that India offers great natural advantages to the paper mill industry in the shape of abundant supplies of raw material. In anticipation of being able to increase our manufacturing facilities we ourselves have developed, or are in course of developing, large additional resources of the staple grass used by ourselves, viz., Sabai; and given a period of reasonable security, we should be able to find means to use these to increase the production of paper. Other materials there are in abundance, as is evidenced by the Report presented in 1919 by the Special Committee appointed at the instigation of the Secretary of State for India by the Committee for India of the Imperial Institute. This Report, as you doubtless recollect, expressed the opinion that India was favourably circumstanced with regard to the development of a trade in "New" paper-making materials, and recommended that certain developments of the manufacture of paper pulp "should receive every encouragement from the Government of India"; also that steps should be taken to render India independent of foreign supplies of pulp and paper in the belief that "the replacement of imports by Indian produce would be quickly followed by a surplus production which would be available for export." This puts the case for the Indian mills very fairly, especially when it is borne in mind that the work of this committee was aimed more towards safeguarding the interests of British paper-makers, by assuring their supplies of material, rather than towards assisting the Indian paper-maker whose views on the subject (so far as he is aware) were not even invited.

7. The industry is one which eminently satisfied the provisions laid down by the Fiscal Commission for the establishment of a claim for pro-

tection. More than that it claims that its present and potential value to the country is so great that, even if no general policy of "discriminating protection" had been adopted by the country, the needs of the paper-making industry at the present time would call for urgent consideration. It supplies or can supply the needs of the country. It not only gives employment directly to some 8,000 persons, but indirectly it provides means of livelihood for many more thousands engaged in allied industries, and in the collection of handling of materials. It creates demands for the production of chemicals and numerous commodities, and offers a market for the products of the mining and metallurgical trades. Thus the interests of many other industries are identified with the welfare of this one industry. The Government will agree, therefore, that its establishment on a secure and profitable basis is essential; and the members of this Association trust that they will be allowed to lay their full case before the Tariff Board should such be constituted, in accordance with the recommendations of the Fiscal Commission.



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## Witness No. 2.

## Upper India Couper Paper Mills Company Limited.

## A.—WRITTEN.

*Statement I.—Replies to questionnaire received from the Upper India Couper Paper Mills Company Limited, dated 19th June 1924.*

We have the honour to enclose 5 copies of our answers, along with 5 statements bearing on question No. 76 (ii).

As already intimated to you our telegram of yesterday our representatives will appear before the Board on Monday, the 23rd instant, at 11 A. M.

## REPLIES TO QUESTIONNAIRE.

## I. INTRODUCTORY.

1. Our firm was established in 1879. It is a Public Registered Company.
2. Almost all the Capital invested in our firm is held by Indians. All the Directors are Indians. Excepting 3 Europeans, all form part of the superior management.
3. Our firm manufactures paper, and pulp only for our own requirements.
4. In 1882.
5. The full capacity of our 2 mills as at present equipped is for 13 tons of paper daily.
6. Previous to year 1885, papers are not traceable.

Years.	Output in lbs.
1885 . . . . .	2,938,764
1886 . . . . .	2,902,415
1887 . . . . .	3,128,353
1888 . . . . .	3,425,622
1889 . . . . .	3,540,818
1890 . . . . .	3,572,080
1891 . . . . .	3,556,901
1892 . . . . .	3,902,394
1893 . . . . .	4,201,927
1894 . . . . .	4,318,125
1895 . . . . .	5,463,072
1896 . . . . .	6,440,414
1897 . . . . .	6,114,198
1898 . . . . .	6,833,931
1899 . . . . .	7,218,700
1900 . . . . .	7,621,082
1901 . . . . .	7,285,043
1902 . . . . .	7,777,343
1903 . . . . .	5,996,791
1904 . . . . .	5,496,520
1905 . . . . .	7,094,854
1906 . . . . .	8,210,644
1907 . . . . .	7,353,479
1908 . . . . .	8,239,073
1909 . . . . .	8,083,458

Years.	Output in lbs.
1910 . . . . .	8,084,708
1911 . . . . .	7,878,749
1912 . . . . .	6,729,185
1913 . . . . .	6,000,472
1914 . . . . .	6,195,635
1915 . . . . .	5,780,676
1916 . . . . .	7,240,008
1917 . . . . .	7,084,811
1918 . . . . .	6,478,688
1919 . . . . .	6,312,956
1920 . . . . .	6,773,034
1921 . . . . .	5,813,010
1922 . . . . .	5,194,096
1923 . . . . .	3,795,955

7. Our mill is situated in Lucknow. Pura Imam Buksh, on the left bank of the river Gomti.

(a) Yes.

(b) Yes, to a certain extent.

(c) Yes.

(d) Labour and quantity of water abundant.

NOTE.—As mentioned above.

8. We make White Printings, Cream-laid, Government Water-marked paper, Azure Laid, Cream Wave, H. B. A. Government, Badamies, Browns, Unbleached Printings, Coloured papers, Antiques, White Cartridge and Manilla, etc.

50 per cent. Badami and Brown.

30 per cent. Whites (including Government Water-marked paper, etc.).

20 per cent. Miscellaneous.

9. Yes, they should be classified as:—

(a) good, (b) medium or, (c) inferior.

All the three (a), (b) and (c) can be made in India.

10. Yes, we make a larger variety of papers than a single manufacturer in western countries commonly does, owing to the nature of demand by the public.

Yes, the Indian manufacturer is at a disadvantage in this respect for the reason that the output would be much more and at a lesser cost if only one or two varieties are manufactured at a stretch.

11. Soda Process, i.e., we pick, cut, boil and re-sort, wash, bleach and break the different raw materials for the manufacture of pulp.

## II. RAW MATERIALS.

12. Rags, Hemp, Jute, Bhabar (Sabai) and Waste papers.

13. (a) 1,800 tons of output per year:—

	Tons.
Rags . . . . .	1,110
Hemp . . . . .	637
Jute . . . . .	555
Bhabar (Sabai) . . . . .	1,125
Waste papers . . . . .	210
	<hr/> 3,637 <hr/>

(b) 3,000 tons output per year, for which we require the following raw materials yearly:—

	Tons.
Rags . . . . .	1,850
Hemp . . . . .	1,062
Jute . . . . .	925
Bhabar (Sabai) . . . . .	1,875
Waste papers . . . . .	350
	<hr/> 6,062 <hr/>

14 and 15. For 1 ton of unbleached pulp or finished paper about 2½ tons of primary raw materials are required.

16. We are able to obtain our requirements of primary raw materials provided nothing untoward stands in our way.

The Director of Industries and Forest Departments may be referred to for further particulars about the available quantity.

17. We draw primary raw materials from the United Provinces, the Punjab, Rajputana, the Central Provinces, the Nepalganj Forests, the Khari Forests, and the Dehradun Forests, and their distance from our factory is from 10 to 500 miles.

18. We employ contractors to supply us the above primary raw materials, delivered into our mills or, at Badshanagar Railway Station.

19. Not known to us.

20. *Vide* our answer to Question No. 18.

	Rate for 1913-14.			Rate for 1923-24.		
	Per ton.			Per ton.		
	Rs.	A.	P.	Rs.	A.	P.
Rags . . . . .	43	8	7	75	1	11
Patna (jute) . . . . .	41	13	3	68	4	8
Hemp . . . . .	64	0	0	99	0	4
Sabai . . . . .	31	2	6	72	2	1
Waste papers . . . . .	15	10	5	51	3	6

21. *Vide* our answer to Question No. 18.

22. No, quality not uniform.

23. (a) No.

(b) Yes, to some extent.

(c) Yes, in case of Rags, etc., specially.

24. \* \* \*

25. Yes, provided there be no vindictive rivalry.

26. We do not agree wholly to the opinion expressed by Mr. R. S. Pearson before the Fiscal Commission. Mr. William Raitt of Dehradun is supposed to be an authority on the subject.

27. Plenty of grass at moderate prices can be had if efforts are made and the Railways charge concession Railway freight.

28. *Nil*.

29. Mr. William Raitt of the Government Cellulose Department, Dehradun, may please be consulted. We do not know.

30. Ditto ditto ditto.

31. Ditto (Paddy straw, Ullagrass, Moonj are suitable for pulp manufacture.)

32. Sufficient quantity of Rags are available but the prices owing to the high cost of living are very high.

33. We have always had contractors.

34. No.

35. No.

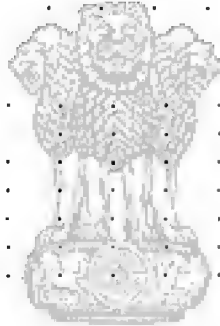
*B. Auxiliary.*

36. Following are the chief auxiliary raw materials, and against them is noted the yearly total requirements:—

	Yearly. Tons.
China Clay . . . . .	225
Bleaching Powder . . . . .	250
Caustic Soda . . . . .	275
Alum . . . . .	400
Rosin . . . . .	75
Soda Ash . . . . .	45
Lime . . . . .	806

37. (a) No.		Cwts.
(b) China Clay . . . . .		14
Bleaching Powder . . . . .		14
Caustic Soda . . . . .		12
Alum . . . . .		24
Rosin . . . . .		4
Soda Ash . . . . .		4
Lime . . . . .		54



सत्यमेव जयते

38. (a) Following are the chief auxiliary raw materials which are imported from abroad.

Name of articles.	Country of origin.	F. O. B. price in sterling per ton.	Port of importation.	Freight insurance per ton.	Landing Charges per ton.	Transport charges to mill.	Customs duty at per cent.	REMARKS.
China Clay . . . .	Manchester, England	£4-11-3 c.i.f. Calcutta.	Calcutta	nil	Rs. 3	Rs. 36-8-0	Rs. 15 %	
Bleaching Powder . . . .	England, Liverpool	£12-15-0	"	nil	" 5	" 22-15-10	" 15 %	
Alum . . . .	Manchester, England	£6-0-0	"	nil	" 3	" 36-8-0	" 15 %	
Caustic Soda . . . .	England, Liverpool	Rs. 325 f. o. b. Howrah.	"	nil	nil	" 22-15-10	nil.	
Soda Ash . . . .	"	Rs. 215-5-0 delvd. mill	"	"	"	"	"	

38. (b) Following are the auxiliary raw materials which are manufactured and purchased in India.

Name of auxiliary materials.	Market price in	per ton.	Transport and other charges per ton.	REMARKS.
Resin . . . .	Rs. 298 1 9	"	Rs. 19 3 3	This is manufactured in Bhawali by Messrs. The Indian Turpentine and Rosin Company of Cawnpore.
Lime . . . .	" 17 12 6	"	" 10 7 3	This is manufactured in Katni Marwar, C. P.

(c) We do not manufacture any auxiliary raw materials ourselves.

39. (a) China Clay is already manufactured. Bleaching Powder, Caustic Soda and Alum (owing to the climatic influences).

(b) Dyes.

### III. LABOUR.

#### A.—Field Labour.

40. We can not say, as we buy from Contractors, who often complain of high wages for labour.

41. Ditto ditto ditto.

42. Indigenous.

43. Vide reply to Question No. 40.

#### B.—Mill Labour.

44. Yes, we employ 3 expert supervisors at present.

45. We do not employ any imported common labourers at present, nor do we think that we shall require any, if the factory is worked at full swing.

46. We never had imported labour, nor do we hope to have it in future. Every facility is given to apprentices for training and examinations are held periodically to test their progress.

47. We can not tell.

48. The total daily average number of Indian workmen had been 512 for the year 1923.

	Rs.	A.	P.		Rs.	A.	P.
Skilled labour . . .	47	0	0	to	118	12	0
Blacksmith . . .	37	8	0				
Fitters . . .	30	0	0	to	37	8	0
Carpenters . . .	26	8	0	to	53	4	0
Masons . . .	17	8	0		22	0	0
Engine Drivers . . .	75	0	0	to	95	0	0
Boilermen . . .	31	8	0				
Unskilled labour . . .	18	8	0				
Messenger . . .	13	0	0				
Cooly men . . .	15	0	0	to	17	0	0
Cooly women . . .	9	8	0				

The above amounts exclude the War Allowance at 12½ per cent. on wages per month.

49. The total wages bill for Indian mill labour for the years:—

	Rs.	A.	P.
1914 . . . . .	58,054	3	6
1923 . . . . .	1,20,559	10	9

As both the machines were not running all the year round in 1923, about 150 men were dismissed for a period of about 10 months or so.

If their wages are also included to compare the figures with the year 1914, such amount of wages for 1923 would be something like Rs. 1,50,000 instead of Rs. 120,559-10-9, as shown above. Up to the end of the year 1918 no general increase in the grades was given but occasionally increases



were given to individuals proving worthy of it and that had increased into a figure of Rs. 65,000 at the close of the year 1918, and since then increases in general affecting the grades of the different classes were given as below:—

*Increases.*

	Rs.	A.	P.
15th September 1919, 15 per cent. on regular pay	15	0	0
1st February 1920, 10 per cent. on the then regular pay	11	8	0
1st November 1920, 25 per cent. on the then regular pay	31	10	0
1st July 1921, 25 per cent. on the then regular pay	39	8	6
	97	10	6

*War Allowance*

1st October 1918, 10 per cent. on regular pay	} i.e., on Rs. 197-10-6. i.e., on Rs. 49-6-6.	
1st January 1920, 5 per cent. on the then regular pay		
1st August 1920, 10 per cent. on the then regular pay		
	TOTAL	247-1-0

that is to say 147 per cent. increase in all was given.

Now, half the war allowance has been cut off since 15th January 1923. The present wages hold on at an increase of Rs. 122-5-9 per cent. on date, as compared with the figures for 1918, and at 148 per cent. as compared with figures for 1914.

50. Yes, the Indian labour force is sufficient. It is drawn from the vicinity of the factory.

51. The Indian skilled labourers improve with training and compare very favourably with the workmen in the Western Countries, provided, we could afford better wages to them.

52. The common labourer, living in the vicinity of the factory and managing other domestic affairs (along with his relatives), such as agriculture, etc., does not like to live in any house offered to him by us.

We, however, provide for him free medicines in case of epidemics or accidents, and winter clothings for those who work in wet places.

IV. POWER (INCLUDING FUEL).

53. Steam.

54.

55. We use coal and it is available in sufficient quantities at collieries, but, owing to the shortness of railway wagons great difficulty is experienced in getting coal; and, pilferages at 7 per cent., in transit are a loss to us.

56. Our average quantity of coal is a little over 5 lbs. to a pound of paper, out of which we reckon half for producing pulp and half for making paper.

57. Distance about 600 miles. From Rs. 5 to Rs. 8-4 per ton for good 2nd class coal (Bengal) loaded into wagons at the colliery siding and Rs. 5-12 per ton, loaded into wagons for Panch Valley coal. Freight Rs. 8-4 per ton to Rs. 10 per ton.

58. We employ contractors.

59. No.

## V. MARKET.

## A.—For paper.

60. Please refer to the Director of Commercial Intelligence.

61. Ditto ditto ditto.

62. It is very likely that the Indian demand for paper will substantially increase in the near future, if the cost of living goes down to that of pre-war days, and education grows more popular as it is hoped.

63. United Provinces, the Punjab, North-Western Frontier, Central Provinces, Rajputana and Central India.

64. No.

65. We do not think.

66. (a) Yes, to a small extent at present.

(b) No.

(i) and (ii) As below.

*Statement showing the quantity of paper supplied to the Government Offices at lower rates than the then market rates during the years of war and afterwards.*

## THE CONTROLLER OF PRINTING, STATIONERY AND STAMPS, CALCUTTA.

*Water-marked paper.*

Period.	Quantity of supply in pounds.	Rate charged.	Market rates during the period of supply.
19-2-16 to 8-3-16 . . .	20,300	Rs. 0-3-10	Rs. 0-4-2
1916-17 . . . . .	7,93,845	„ 0-4-4-9	„ 0-5-0 to 0-7-0
1917-18 . . . . .	5,28,381	„ 0-6-6	„ 0-7-0 to 0-8-9
1918-19 . . . . .	8,39,454	„ 0-7-4	„ 0-8-9 to 0-9-3
1919-20 . . . . .	4,32,600	„ 0-7-6	„ 0-8-6
1920-21 . . . . .	5,19,167	„ 0-7-6	„ 0-8-3, 0-8-6, 0-9-0, 0-9-6 and 0-11-0
1921-22 . . . . .	5,92,496	„ 0-10-0	„ 0-14-0, 0-12-0 down to 0-7-0

## II. B. B.

1916-17 . . . . .	6,17,120	„ 0-4-0	„ 0-4-6 to 0-6-0
1917-18 . . . . .	4,15,900	„ 0-4-6	„ 0-6-0 to 0-7-3
1918-19 . . . . .	5,42,630	„ 0-4-6	„ 0-5-9 to 0-7-3
1919-20 . . . . .	6,11,685	„ 0-4-3	„ 0-7-3 to 0-5-6
1920-21 . . . . .	4,78,323	„ 0-5-0	„ 0-5-6 to 0-5-9

*Unbleached.*

Period.	Quantity of supply in pounds.	Rate charged.	Market rates during the period of supply.
1918-19 . . . .	1,00,000	Rs. 0-5-6	Rs. 0-7-0 to 0-7-3

## THE CONTROLLER OF STATIONERY, MADRAS.

*Azure Laid.*

1920 . . . . .	43,680	Rs. 0-8-0	Rs. 0-10-0
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## THE DIRECTOR OF LAND RECORDS, UNITED PROVINCES.

*H. B. B.*

22-2-14 to 29-5-16 . . . .	8,77,216	Rs. 0-2-0	Rs. 0-2-½ to 0-2-9
1916-17 . . . . .	2,74,400	„ 0-2-6	„ 0-3-6 to 0-4-6
1917-18 . . . . .	1,54,560	„ 0-4-9	„ 0-5-0 to 0-6-0
1918-19 . . . . .	1,96,800	„ 0-5-0	„ 0-7-0 to 0-7-3
1919-20 . . . . .	2,01,600	„ 0-5-0	„ 0-7-3 to 0-5-9
1922-23 . . . . .	2,01,600	„ 0-4-3	„ 0-5-3
1923-24 . . . . .	2,01,600	„ 0-3-6	„ 0-4-0 & 0-3-9

*Brown.*

1919-20 . . . . .	33,600	„ 0-3-11	„ 0-5-0 to 0-4-6
1922-23 . . . . .	38,080	„ 0-3-8-8	„ 0-4-6 to 0-3-6
1923-24 . . . . .	39,080	„ 0-3-0	„ 0-3-3

## STATE RAILWAYS.

## NORTH-WESTERN RAILWAY.

*Brown.*

1915-16 . . . . .	7,62,264	Rs. 0-1-8½	Rs. 0-2-0 to 0-2-6
1916-17 . . . . .	2,48,928	„ 0-2-7	„ 0-2-11 to 0-8-0
1918-19 . . . . .	45,390	„ 0-10-0	„ 0-10-3

## EASTERN-BENGAL STATE RAILWAY.

*Coloureds.*

Period.	Quantity of supply in pounds.	Rate charged.	Market rates during the period of supply.
1918-19 . . . . .	22,368	Rs. 0-10-0	Rs. 0-10-3

## ODISH AND ROHILKHAND RAILWAY.

*Coloureds.*

1918-19 . . . . .	7,800	Rs. 0-10-0	Rs. 0-10-3
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## STATE RAILWAYS.

*Coloureds.*

1920 . . . . .	1,01,920	Rs. 0-7-1	Rs. 0-9-0
1921 . . . . .	80,640	„ 0-10-0	„ 0-10-0
1923 . . . . .	15,680	„ 0-5-3	„ 0-8-0

*Superior Badami.*

1921 . . . . .	5,21,920	Rs. 0-6-6	Rs. 0-7-6
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*Common Badami.*

1921 . . . . .	8,28,800	Rs. 0-4-3	Rs. 0-5-6
1923 . . . . .	1,12,000	Rs. 0-3-6	Rs. 0-4-0

*Superior Badami*

1923 . . . . .	67,200	Rs. 0-3-9	Rs. 0-4-4
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*Brown.*

1921 . . . . .	1,36,840	Rs. 0-3-9	Rs. 0-4-6
1923 . . . . .	11,200	„ 0-3-0	„ 0-3-6

*Coloureds.*

Period.	Quantity of supply in pounds.	Rate charged.	Market rates during the period of supply.
1923 . . . . .	15,680	Rs. 0-5-3	Rs. 0-8-0

*Blotting.*

1922 . . . . .	34,720	Rs. 0-7-0	Rs. 0-9-0
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*White Printing.*

1918-19 . . . . .	1,12,008	Rs. 0-6-3	Rs. 0-9-9
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THE CONTROLLER OF CONTRACTS, SIMLA.

H. B. B.

1918 . . . . .	57,296	Rs. 0-5-0	Rs. 0-6-9 & 0-7-0
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THE CONTROLLER OF INDIAN MUNITIONS BOARD.

H. B. B.

1918-19 . . . . .	24,000	Rs. 0-5-2	Rs. 0-7-0
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THE EDITOR, WAR JOURNAL.

*Coloureds.*

1918-19 . . . . .	32,000	Rs. 0-10-0	Rs. 0-10-3
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NOTE.—We have taken for comparison the rates for the Water-marked paper and those for White Printing No. 3. But be it noted that the Water-marked paper, supplied to Government, is far superior to White Printing

No. 3. At least an addition of anna 1 per lb. to the above rates for White Printing No. 3 would give the correct basis for comparison.

67. Very little, owing to cheap wood paper from Europe, against which we cannot compete.

*B.—For Pulp.*

68 to 72. \* \* \* \*

VI. FOREIGN COMPETITION.

*Paper.*

73. Germany, Norway, Sweden, England and Japan and Austria.

74. Yes, in all grades.

75. Wood pulp generally and also Esparto.

76. (i) Cannot say.

(ii) A separate statement attached.

77, 78 and 79. Our information is based on the following reports (made at the Conference held at Stationery Office on 20th November 1923):—

"Mr. Carr thought that what Mr. Ascoli (Controller of Stationery) wanted to get was a reasonable price and the whole matter turned on the interpretation of the term reasonable whether, in fact, this meant the cheapest price at which it was possible to buy. It was quite possible, for instance, that after calling for tenders for 1,000 tons of paper the Controller might get quotations from people holding large stocks who were willing to accept a cut price in order to enable them to get rid of their stocks; but this would not be a reasonable price."

"Mr. Ascoli replied that last winter at any rate the home mills were not holding stocks, but were making only to order; and they were now willing to take orders sufficient to keep them running but without making any profit."

While the Paper Makers' monthly Journal, dated 15th December 1923, states the home manufacturers' views as under:—

"No more convincing case for the protection of British manufacture in the home market can be cited than that of paper. Here is an industry that is struggling for its existence against the unrestricted dumping in this country of thousands of tons of paper month after month from countries with depreciated currencies. At the same time British mills are finding an increasing difficulty in disposing of their output, and in many cases are running only on half their normal production."

The World's Paper Trade Review, dated 4th January 1924, in its review of the British Paper Industry in 1923, says:—

"The imports from Germany into the United Kingdom have shown a startling increase. Many German news-print mills, deprived of their normal market by the extinction of a number of local newspapers have transferred their activities to the production of wrappings, thus further inflating an already expanded output of this class of paper with the consequence that the British wrapping mills have been running on short time, while increased quantities of foreign paper have landed on our shores. It will be seen that the home mills have good reason for disquiet."

The Paper Makers' monthly Journal (London), dated 15th January 1924, states:—

"But the Industry has been seriously handicapped by the large quantity of paper coming from foreign countries working under conditions with which it is impossible for us to compete."

The Paper Makers' British Paper Trade Journal, dated 1st January 1924, says:—

"It may be taken as a fact that certain mills now absolutely "flattened out" by foreign competition will have to very seriously consider their position—the outlook is distinctly discouraging, to put the thing mildly."

80. All over India.

81. Unemployment and depression of trade owing to the non-settlement of Reparations question.

82. We do not know.

83. We do not know.

84. We do not know because we do not deal in foreign papers.

85. (a) Yes, at a disadvantage in the cost of plant and machinery: it costs about 20 per cent. higher in India.

(b) We cannot say.

(c) We cannot say.

(d) We cannot say.

(e) Yes, because of shipping charges, customs duties and railway freight from Port to our mills. Bleaching powder costs about 80 per cent. more in India and Caustic Soda 40—45 per cent. more. These excesses include any loss of strength that occurs.

(f) Yes; the railway freight in particular should, in our opinion, be reduced.

(g) Yes, because we have to keep a stock for at least 3 months ahead, as it takes about 3 months to arrive here.

(h) Yes, 15 per cent. on invoice cost.

(i) Yes, as people in our part of the country are rather timid in so far as investing of money in business is concerned, especially when there are no prospects of profits.

86. We are not in a position to answer this question.

## VII. EQUIPMENT.

87. We cannot say.

88. Yes.

89. *Vide* answers to Questions Nos. 96 and 101.

90. Rag Cutters, Rag Dusters, Rag Boilers, Grass Willow, Grass Elevators, Grass Boilers, Poochers, Washers and Bleachers, Beaters, Stuff Chests, Pumps, Wire Mould, Couch Rolls, 1st and 2nd Press Rolls, Heating Cylinders, Dampers, Calender Rolls, Friction Rolls, Paper Cutters, Steam Engines and Steam Boilers.

91. Yes, with a little alteration and addition to Machinery provided there is no vindictive competition.

92. Yes.

93. No, excepting only necessary additions and alterations.

94. (a) Yes, we do contemplate certain renewals to our machinery.

(b) No, We have not got sufficient money.

95. None, as far as we are aware.

## VIII. CAPITAL ACCOUNT.

Q. 96		Q. 97
Assets Particulars.	Value of property as it stood on. 31st Decr. 1923.	Depreciation written off to 31st Decr. 1923.
	Rs. A. P.	Rs. A. P.
Land* . . . . .	1,000 0 0	..
Buildings . . . . .	2,59,618 4 11	2,30,066 6 9
Plant and Machinery . . . . .	1,98,989 8 7	11,81,581 3 8
Furniture . . . . .	7,028 9 10	5,863 14 8
TOTAL . . . . .	4,66,36 7 4	14,17,511 9 1

\* Besides the price paid for land, as shown above, the Company pays annual rent at present of Rs. 2,074 to Nazul Department.

98. We think the present method of calculating the depreciation on the prime cost at  $7\frac{1}{2}$  per cent. on machinery and  $2\frac{1}{2}$  per cent. on building is quite reasonable.

The amount of depreciation written off by us to date appears to be in accordance with the life of the machines and buildings.

99. (a) and (b) About 40 lakhs will be required for a new plant and buildings. It is about  $2\frac{1}{2}$  times the value of the plant and buildings as compared to that when we erected ours. The operating cost of an up-to-date machinery may compare favourably to the present one.

100. \* \* \* \*

101. (a) Authorised.

(b) Issued.

(c) Subscribed, 8,000 shares at Rs. 100 each, fully paid up Rs. 8,00,000. All ordinary shares.

102. No preference shares.

103. Nil.

104. (a) Share Capital Ordinary.

Registered in 1879.

	Rs.	A.	P.
December 1879 . . . . .	15,898	2	0
„ 1880 . . . . .	4,89,968	7	11
„ 1881 . . . . .	5,41,916	14	11
„ 1882 . . . . .	5,69,201	2	1
„ 1883 . . . . .	5,76,981	7	5
„ 1884 . . . . .	5,77,911	4	3
„ 1885 . . . . .	5,71,900	0	0
„ 1886 . . . . .	5,72,000	0	0



					Rs.	A.	P.
December	1887	.	.	.	5,73,500	0	0
"	1888	.	.	.	5,74,500	0	0
"	1889	.	.	.	5,75,200	0	0
"	1890	.	.	.	5,75,500	0	0
"	1891	.	.	.	5,76,800	0	0
"	1892	.	.	.	7,33,300	0	0
"	1893	.	.	.	7,32,900	0	0
"	1894	.	.	.	7,86,600	0	0
"	1895	.	.	.	8,00,000	0	0

(b) About 45 lakhs have been paid in all as dividend and Bonus to our Shareholders since the commencement of the Company.

(c)

Half-year ended.	Rate per cent. per annum.
31st December 1882	6
30th June 1883	6
31st December 1883	nil.
30th June 1884	nil.
31st December 1884	nil.
30th June 1885	4
31st December 1885	4
30th June 1886	4
31st December 1886	4
30th June 1887	4
31st December 1887	6
30th June 1888	7
31st December 1888	7
30th June 1889	7
31st December 1889	7
30th June 1890	7
31st December 1890	8
30th June 1891	9
31st December 1891	10
30th June 1892	10
31st December 1892	10
30th June 1893	10
31st December 1893	10
30th June 1894	10
31st December 1894	10
30th June 1895	10
31st December 1895	10
30th June 1896	nil.
31st December 1896	nil.
30th June 1897	4
31st December 1897	6
30th June 1898	7
31st December 1898	8
30th June 1899	8
31st December 1899	8
30th June 1900	8

Half-year ended.	Rate per cent. per annum.
31st December 1900 . . . . .	8 & 2 % bonus.
30th June 1901 . . . . .	8 & 2 % bonus.
31st December 1901 . . . . .	8 & 2 % bonus.
30th June 1902 . . . . .	8 & 2 % bonus.
31st December 1902 . . . . .	8 & 2 % bonus.
30th June 1903 . . . . .	8
31st December 1903 . . . . .	6
30th June 1904 . . . . .	5
31st December 1904 . . . . .	5
30th June 1905 . . . . .	6
31st December 1905 . . . . .	8 & 4 % bonus.
30th June 1906 . . . . .	8
31st December 1906 . . . . .	6
30th June 1907 . . . . .	8
31st December 1907 . . . . .	8
30th June 1908 . . . . .	8
31st December 1908 . . . . .	8
30th June 1909 . . . . .	8 & 2 % bonus.
31st December 1909 . . . . .	6
30th June 1910 . . . . .	6
31st December 1910 . . . . .	6
30th June 1911 . . . . .	6
31st December 1911 . . . . .	6
30th June 1912 . . . . .	6
31st December 1912 . . . . .	4
30th June 1913 . . . . .	5
31st December 1913 . . . . .	5
30th June 1914 . . . . .	6
31st December 1914 . . . . .	6 & 2 % bonus.
30th June 1915 . . . . .	6 & 3 % bonus.
31st December 1915 . . . . .	6 & 6 % bonus.
30th June 1916 . . . . .	6 & 10 % bonus.
31st December 1916 . . . . .	6 & 26½ % bonus.
30th June 1917 . . . . .	6 & 14 % bonus.
31st December 1917 . . . . .	6 & 62 % bonus.
30th June 1918 . . . . .	6 & 44 % bonus.
31st December 1918 . . . . .	6 & 60 % bonus.

Half-year ended	Rate per cent. per annum.
30th June 1919 . . . . .	6 & 54 % bonus.
31st December 1919 . . . . .	6 & 64 % bonus.
30th June 1920 . . . . .	6 & 34 % bonus.
31st December 1920 . . . . .	6 & 54 % bonus.
30th June 1921 . . . . .	6 & 54 % bonus.
31st December 1921 . . . . .	6 & 34 % bonus.
30th June 1922 . . . . .	6 & 24 % bonus.
31st December 1922 . . . . .	6 & 34 % bonus.
30th June 1923 . . . . .	6 & 24 % bonus.
31st December 1923 . . . . .	6 & 24 % bonus.

105. The average of dividend and bonus paid to the Shareholders since the commencement of the mill to date works out at 14 per cent.

106. Nil.

107. Reserve Funds, created out of the surplus profits, stand on date as under:—

	Rs.
Reserve Fund . . . . .	5,00,000
Contingent Fund . . . . .	50,000
Stock and Stores Depreciation Fund . . . . .	50,000
Renewal to Machinery Fund . . . . .	14,20,000
Bad and Doubtful Fund . . . . .	30,000
Dividend and Bonus Equalization Fund . . . . .	73,000
<b>TOTAL</b> . . . . .	<b>21,23,000</b>

108. Rs. 40,00,000, provided trade conditions take a hopeful and favourable turn.

#### IX. COST OF PRODUCTION.

109. The Form No. 1, showing the expenditure under different heads, as desired, is on page 18.

## FORM No. 1.\*

Statement showing the total expenditure on the production of paper during the following years:—

No	Particulars.	1914	1921	1922	1923	REMARKS.
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
1	Primary Raw Materials . . . . .	2,06,113 13 10	3,61,746 5 9	3,17,813 13 8	2,45,349 10 11	
2	Purchased Pulp . . . . .	4,580 11 0	0 0 0	0 0 0	0 0 0	
3	Auxiliary Raw Materials . . . . .	1,75,604 1 4	3,93,878 12 1	2,26,258 13 6	1,96,582 7 5	
4	Labour and Establishment (which includes Mill hands European and Office staff).	1,19,675 4 6	2,71,640 8 7	2,75,934 7 6	2,21,936 15 6	
5	Power and Fuel (Coal) . . . . .	1,44,909 3 6	2,70,721 12 7	2,29,230 2 6	1,89,806 2 7	
6	Ordinary current repairs and maintenance of buildings, Plant and machinery.	1,00,338 12 9	2,32,517 1 3	1,86,320 15 1	1,50,106 12 5	
7	General Services (Income-tax, freight on paper, General charges, Postage, Audit fee, Directors' Commission, etc.).	67,269 3 2	2,67,189 5 6	1,89,680 9 11	1,34,229 10 10	
8	Miscellaneous (e.g., Rent, Municipal Taxes, Insurance, etc.).	5,502 12 0	16,986 0 1	13,812 9 10	16,338 0 4	
9	NIL NIL NIL	.....	.....	.....	.....	
	TOTAL	8,23,993 14 1	18,14,679 13 10	14,41,051 8 0	11,54,349 11 11	
	Finished output in lbs. . . . .	61,95,635 lbs.	58,13,009 lbs.	51,94,096 lbs.	37,95,955 lbs.	

\* Subsequently revised, see Statement II, Appendix A.

## FORM No. IV.\*

Showing the Works cost per ton of finished paper.

	1914.	1921.	1922.	1923.	REMARKS.
1. Raw materials . . . . .	74.52	139.4	137.04	144.75	
2. Purchased bleached pulp . . . . .	1.65	..	..	..	
3. Auxiliary raw materials . . . . .	63.48	151.78	97.56	115.97	Superior quality paper manufactured.
4. Labour and Establishment . . . . .	43.23	104.65	118.99	130.93	On one machine.
5. Power and fuel . . . . .	52.38	104.32	98.85	111.98	Shortness of coal.
6. Ordinary current repairs and maintenance of building, plant and machinery.	36.27	89.6	81.2	88.55	
7. General services, etc., Income-tax, Freight on paper, General charges, postage stamps, Audit fee, Director's Commission, etc.	24.32	102.98	81.79	79.19	Income-tax.
8. Miscellaneous, e.g., rent, municipal taxes, Assurance, etc.	1.99	6.54	5.95	9.63	More fully insured—Octroi also new tax levy.
9. Any other charges . . . . .	..	..	..	..	
TOTAL	297.84	698.25	621.38	681.00	

\* Subsequently revised, see Statement II, Appendix B.

110. Yes, in the last year, i.e., 1923. All items of expenditure were high excepting the consumption of the raw materials.

See statement in reply to Question No. 104 (a).

111. Lack of business did not allow us to manufacture paper for stock in addition to the heavy stock already in hand.

It seems rather difficult to base anything on future and prospective normal conditions. For instance, what figures we are to take for the labour and establishment which is almost double the pre-war days and there are very few chances of bringing down the same to the normal state or thereabout in the near future.

Secondly, railway freight on coal, other materials and finished paper, has gone up and we can not think when we shall have any reduction in that, and which probably will not be reduced till the normal conditions of labour return. Similarly is the case with the prices of several kinds of raw materials, as their rates mostly depend on the wages, Railway freight, etc.

The maximum output can only reduce the cost in proportion but it cannot make up the loss caused by the decreasing rates of paper.

112. No.

113. No.

(b) Overhead Charges.

(i) Depreciation.

114. The rates allowed at present by the Income-tax Authorities are:—

7½ per cent. on Machinery.

5 per cent. on Furniture.

2½ per cent. on Buildings.

on the prime cost of the machinery, buildings and furniture. We consider they are suitable.

115. The maximum amount of depreciation which we can lay aside every year, as per Depreciation Account, at the Income-tax Office, would be as below:—

(h)

	Rs.
Machinery . . . . .	69,695
Buildings . . . . .	11,460
Furniture . . . . .	533

116. \* \*

117. \* \*

(ii) Working Capital.

118. About 20 lakhs is the invested amount in business at the present day with the depreciated value of our machinery and buildings, etc. Most of the amount is invested in the stock of paper and the stores in hand. It would make little difference in our investment in business if we run at full capacity or as we are doing at present by running only one machine. Much depends on the sale of stock and the output for every year, as it is the only source of reducing the Capital investment in business.

119. The Company possesses its own money.

120. \* \*

121. \* \*

122. The following are the figures for the stock of paper held by the Company:—

	Rs.	A.	P.
1st January 1915 . . . . .	2,83,199	15	3
1st January 1916 . . . . .	2,50,606	0	3
1st January 1917 . . . . .	2,24,691	5	8
1st January 1918 . . . . .	2,14,081	0	8
1st January 1919 . . . . .	2,63,332	1	0
1st January 1920 . . . . .	5,39,849	2	4
1st January 1921 . . . . .	3,29,065	14	5
1st January 1922 . . . . .	4,18,737	3	2
1st January 1923 . . . . .	6,81,055	0	2
1st January 1924 . . . . .	6,82,213	2	3

That shows the stock is now increasing and so a good portion of Company's money remains locked up on this account.

About 1 month's time in case of Public supply.

\*(3) About 3 months' time in case of Government Office.

About 2 months' time in case of Native States.

The average value of the stock of finished paper held by the Company for the last 11 years is Rs. 4,30,537.

123. Statement showing the store articles in hand for the last 10 years, is given below:—

	Rs.	A.	P.
1st January 1915 . . . . .	2,87,098	1	9
1st January 1916 . . . . .	2,96,437	2	11
1st January 1917 . . . . .	4,17,561	0	4
1st January 1918 . . . . .	4,19,690	10	6
1st January 1919 . . . . .	5,51,102	14	3
1st January 1920 . . . . .	5,28,679	10	5
1st January 1921 . . . . .	6,16,085	0	3
1st January 1922 . . . . .	6,78,721	3	9
1st January 1923 . . . . .	5,93,088	4	2
1st January 1924 . . . . .	4,61,400	0	0

The average value of the stores held by the Company for the last 10 years, is Rs. 4,84,988.

(iii) Agents' Commission and Head Office expenses.

124. No.

125. \* \*

126. \* \*

127. \* \*

#### X. MANUFACTURER'S PROFITS.

128. About 10 per cent. when the money is tight all round.

129. About 8 per cent.

130. About 10 per cent.

131

# XI. CLAIM FOR PROTECTION.

132. A. (a) *Re* Advantages—labour, market, raw materials *vide* our answer to Question 44 submitted to the Indian Fiscal Commission, dated 29th January 1922.

"There are several natural advantages for pulp and paper manufacture in India.

(a) In the first place India possesses an abundant supply of the raw materials, e.g., rags, hair grass, hemp and jute waste. These are at present used for the manufacture of pulp. As Mr. W. Raitt, Cellulose Expert to the Government of India, has pointed out in his paper on "Paper Supplies from India" read before the Indian Section of the Royal Society of Arts on the 3rd May 1921, if bamboos and savannah grasses available in different parts of India are utilised, India could produce thirteen million tons of pulp annually, a quantity which would suffice for the whole world at the present rate of consumption. Moreover bamboo pulp has a very great advantage over wood pulp which is at present chiefly used for paper manufacture in almost all the foreign countries. The growth of trees for wood pulp is slow and it takes thirty to forty years to replace the trees which have been cut down whereas bamboos can be reproduced almost every year and Mr. Raitt calculates that for a ten-thousand ton pulp output per annum a 20,000 acre reserve can keep a factory going in perpetuance—a vastly different condition of affairs from those governing a wood pulp insulation which lives on its capital from the start or must adopt a re-afforesting policy which reacts badly upon costs.

(b) Abundant supplies of cheap labour are available in Lucknow. In sympathy with the general rise of prices wages have nearly trebled during the last seven years, but the mills have hitherto experienced no trouble in obtaining any adequate supply of labour from the villages in the vicinity.

(c) The consumption of paper in India with its vast population is much greater than the supply. Before the war the average annual consumption of paper in India was about 75,000 tons a year whereas the aggregate quantity of paper produced in the Indian paper mills was only 30,000 tons a year. India had thus to import about three-fifths of its supplies from abroad and the prices of paper in India were governed by the prices of imported article. With the extension of education in India there will be and is bound to be an enormous increase in the amount of paper required."

A (b) \* \* \*

B. *Vide* answer to Question No. 50, of our above written Evidence, etc.

"Notwithstanding the fact that India undoubtedly produces an enormous variety of suitable paper-making materials, the existing Indian mills were consistently undersold before the war in many descriptions of finished paper, and further they made use of a great quantity of wood pulp. The industry was without question in a very shaky condition. The mills were either giving no dividends or small dividends taking the last ounce of their machinery, with no provision for the future.

The following table shows the Imports of Wood pulp from various countries:—

	1913-14 (pre-war year.)	1916-17.	1917-18.	1918-19.	1919-20.
	Tons.	Tons.	Tons.	Tons.	Tons.
Total Imports of wood pulp	12,400	8,400	3,600	2,100	5,500



With the decrease of imports during the war the paper mills have made large profits and have accumulated large reserves which will enable them to obtain new machinery or make extensions.

On account of the difficulty of obtaining wood pulp owing to the war, attention was directed to other raw materials but the difficulty of obtaining chemicals and coal was seriously felt.

For the full development of the industry much will seem to depend upon the extent to which the associated industries are developed in India. Up to now, bleaching-powder, caustic soda, rosin for sizing, china clay and aluminio-ferrie have all been imported as have been also the colours used for toning white papers and dyeing coloured papers. With a wealth of fibres to draw upon and with an adequate local supply of chemicals at a reasonable price, India certainly ought to be in a position not only to produce the whole of her own requirements of ordinary paper, but also to become one of the great pulp exporters.

But as already pointed out the competition before the war was so serious, and there is such likelihood of its remaining unabated after the war, that an ample measure of protection would seem to be very necessary. In fact foreign competition is already asserting itself and if it grows the Lucknow Paper Mills at least will not be able to sell its white paper and will have to considerably lower their rates for Badami.

It is difficult to say exactly what rate of duty should be levied unless all facts as regards the cost of production and expenses of marketing in foreign countries are available, but in order to be effective the duty will have to be particularly heavy—say from thirty to forty per cent.

C. *File* answer to Question No. 51 of our above written evidence, etc.

"If the protection is granted for a sufficiently long period—say twenty years—(the protection becoming less and less every five years) I see no reason why the industry should not be able to stand on its own legs. This of course assumes that the other associated industries will develop and the Government aid will be forthcoming in the provision of research and transport facilities and in other ways.

133. (a) Yes.

(b) Yes.

134. *File* answer to Question No. 45 of our above written Evidence, etc.

"The paper industry, it is obvious, is both essential to the National Security and of substantial importance to the Economic Prosperity of the country. If the supplies of paper are cut off the ordinary work of administration and military operations would be greatly impeded. We all remember how during the war paper had to be economised but, thanks to the existence of paper mills in India, the armies in India, Mesopotamia and to some extent in Egypt were kept supplied with paper and forms, the wants of the civil administration in India and in some of the further East Colonies were met and though the private purchaser in this country has had his difficulties, all essential publications were maintained without break. When the supplies of paper for post-cards from Austria were cut off, the Indian mills rose equal to the occasion and provided for no less than sixty-three millions of post-cards.

"Cheap papers, moreover, are essential for the spread of education and the half anna newspaper has proverbially a vast educative influence. The United Kingdom and Germany, before the war, used to consume thirteen pounds of paper per head in a year, and the average for France was ten pounds. In the consumption of paper relatively to population, the United States are ahead even of Great Britain and Germany, which is no doubt chiefly due to the wide circulation of newspaper in that country and hence speaks volumes not only for the advanced state of popular education, but also for the general diffusion of ordinary comforts among the people." (Chisolm: Handbook of Commercial Geography.) In Japan, paper is used

for making clothes and as substitute for leather. The average consumption of paper in India works out at only 0.525 lbs. per head per year.

135. *Vide* Introduction, paragraph 4 of our written evidence \*, etc.

136. Yes, protective duties should be imposed on all qualities of paper which the Indian mills produce.

137. (a) By imposition of extra duty to counter-balance the depreciated exchange.

(b) Ditto.

(c) \* \* \*

138. (a) 15 per cent.

(b) We cannot say.

139. 30 to 40 per cent. Since the industry suffers from dumping.

140. Because the industry has grown self-supporting and owing to foreign competition.

141. Equally on both.

#### Conclusion.

1. We have suggested 30 to 40 per cent. on all imports of finished paper and pulp from foreign countries, in view of the present day conditions. If, after the imposition of the above duty, the foreign manufacturer reduced the rates, we respectfully suggest the rate of duty should be enhanced proportionately.

2. It is feared, as a result of protection, that new mills, with large foreign capital, might be started in the near future to compete with the *hand made* Indian mills. In order to safeguard the interests of the Indian mill, we respectfully beg to suggest that there should be at least two-thirds of the Indian capital and two-thirds of the Indian Directorate in the case of the foreign mills.

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\* Not printed as this passage has no bearing on the question asked.

Enclosure I.—Statement showing the prices realised by the Coy. (vide Q. M. 76 (ii))

Class of Paper.	1st October 1910	9th September 1912	2nd May 1913	8th September 1914	6th October 1914	18th October 1915	15th January 1916	2nd February 1916	10th February 1916	3rd March 1916
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Azure Laid	0 7 0	..	..	0 3 3	0 3 4	..	..	..	..	0 4 0
Blotting White	0 1 11 1/2	0 1 10 1/2	..	0 2 0	..	..	..	..	..	..
Brown 12 1/2 lb	..	..	..	..	..	..	..	..	..	..
" 14 1/2 lb	..	..	..	..	..	..	..	..	..	..
" Heavy	0 2 3	0 2 9	..	0 1 9	0 2 5	..	..	..	..	..
" Cord	0 2 10	0 2 10	..	0 2 11	0 2 5	..	..	..	..	..
" Glazed	0 2 9	0 2 9	..	0 3 0	0 3 1	0 3 0	..	0 3 3	0 3 8	0 6 0
Coloured	..	..	..	..	..	..	..	..	..	..
Cream Laid No. I	0 2 6	0 2 5 1/2	..	0 2 7 1/2	0 2 9	..	0 2 10 1/2	0 3 1	0 3 6	0 4 2
Cream Laid No. III 6lb	0 2 6 1/2	0 2 5 1/2	..	..	..	..	..	..	..	..
" 7lb	..	..	..	..	..	..	..	..	..	..
" 8lb	..	..	..	..	..	..	..	..	..	..
" 9lb	..	..	..	..	..	..	..	..	..	..
" A 2 1/2 lb	..	..	..	..	..	..	..	..	..	..
" Heavy	0 2 10	..	..	..	0 3 0	..	0 2 10 1/2	0 3 0	0 3 5	0 4 1
Cream Wove	..	..	..	..	..	..	..	..	..	..
Drawing	0 2 5	0 2 4	..	0 2 6	..	..	..	..	0 3 4	0 4 0
H. B. 9lb	0 2 2	1 1 9	..	1 6 3	1 7 0	1 8 0	1 9 0	..	..	0 2 9
" 10 1/2 lb	..	..	..	..	..	..	..	..	..	..
" 11lb	0 2 1 1/2	0 2 1	..	..	..	..	..	..	..	..
" Heavy	0 2 10 1/2	0 2 8	..	0 2 2 1/2	0 2 3	..	..	..	..	..
Notional (free)	0 2 10	0 2 7	..	0 2 10	0 2 10 1/2	..	..	..	..	..
White No. I	0 2 8 1/2	0 2 7	..	0 2 9	0 2 10 1/2	..	..	0 2 11	0 3 6	0 4 2
" III 12 1/2 lb	..	..	..	..	..	..	..	..	..	..
" Heavy	0 2 6 1/2	0 2 5 1/2	..	0 2 7 1/2	0 2 8 1/2	..	0 2 10	0 3 0	0 3 4	0 4 0
White rough	..	..	..	0 2 7 1/2	..	..	..	..	..	..
Woolf	..	..	..	0 2 7 1/2	..	..	..	..	..	..









STATEMENT II.—*Letter from the Upper India Copper Paper Mills Company, Limited, dated the 5th July 1924, forwarding supplementary information.*

As so kindly desired by your Board we respectfully submit herewith our answer to the Questions as per enclosed sheet.

If anything further be required we shall be very glad to furnish the same

# LIST OF STATEMENTS.

<i>Questions.</i>	<i>Answers.</i>
To be marked—	
II-A. Statement to show the substitution of Indian for European supervisors.	Already submitted to the Board at Simla.
II-B. Statement to show Railway freight on paper from Lucknow to half a dozen important Railway Stations.	Ditto.
II-C. A proper answer to Question No. 140	This is under preparation and will be sent early next week.
II-D. Rates of Primary and Auxiliary raw materials for the years 1914 and 1924.	Statement enclosed.
II-E. Estimate for the new machinery	Already submitted by our Manager at Simla.
II-F. Statement to show profits and disbursement thereof.	Statement enclosed.
II-G. Statement to show quantities of Primary and auxiliary raw materials, and coal with rates and prices relating to figure of Form No. I, Question No. 109.	Statement enclosed.
II-H. War work . . . . .	This is still under preparation and will be despatched early next week.

Besides the 3 statements marked as II-D, II-F and II-G, as mentioned above, we are enclosing 5 copies each of the Form Nos. I\* and IV†, relating to Question No. 109, and would request you to kindly substitute these forms for those already given to the Board as some changes in the figures have been made.

\* Appendix A.

† Appendix B.



## ENCLOSURE A.

*Statement showing the substitution of Indians for Europeans in the Superior Technical Staff since the commencement of the Mill till date.*

No.	Capacity.	1900.	1904.	1914.	1918.	1923.	1924.
1	Manager	European.	European.	European.	European.	Indian.	Indian.
1	Foreman	"	"	Indian.	Indian.	Indian.	Indian.
2	Machinemen	"	"	European.	European.	European.	Europeans.
2	Benchermer	"	1 Indian.	1 Indian.	1 Indian.	1 Indian.	2 Indians
		"	1 European.	1 European.	1 European.	1 European.	
1	Engineer	"	European.	European.	Indian.	Indian.	Indian.

On account of the untimely death of three of our approved apprentices, who were intelligent and hard working and had received several years training, we are compelled to keep 2 European Machinemen but time is soon coming when two of our present apprentices will be competent enough to take charge of the Machine Department.

## Enclosure B.

*Railway freight on Paper per pound from Lucknow to Important Stations.*

									Pies.
Calcutta	about	.	.	.	.	.	.	.	2-50
Bombay	"	.	.	.	.	.	.	.	3
Peshawar	"	.	.	.	.	.	.	.	3-50
Lahore	"	.	.	.	.	.	.	.	2-75
Rawalpindi	"	.	.	.	.	.	.	.	3
Benares	"	.	.	.	.	.	.	.	1-25
Allahabad	"	.	.	.	.	.	.	.	1
Amritsar	"	.	.	.	.	.	.	.	2-50
Jubbulpur	"	.	.	.	.	.	.	.	1-50
Cawnpore	"	.	.	.	.	.	.	.	50

## Enclosure D.

*Statement showing the rates of Primary and Auxiliary Raw Materials during the years 1914 and 1924.*

Name of Articles.		1914.			1924.		
		Rs.	A.	P.	Rs.	A.	P.
1. Raw Materials --					Rate per maund.		
Rags	.	1	9	6	2	12	0
Patmal	.	1	8	6	2	8	0
Hemp Rope	.	2	5	6	3	10	0
Bailb	.	1	2	10	2	8	0
Waste Paper	.	0	10	7	1	11	4
2. Auxiliary Raw Materials—					Rate per ton.		
Bleaching Powder	.	183	2	7	249	14	11
China Clay	.	78	13	10	122	14	0
Caustic Soda	.	222	3	3	354	6	7
Rosin	.	225	0	0	327	5	0
Katni Clay	.	11	12	11	15	8	1
Alum	.	99	1	5	145	13	8
Lime	.	17	3	5	29	2	9

Enclosure E.

*Letter from the Upper India Paper Mills, Ltd., dated 1st July 1924.*

With reference to my oral evidence held on the 23rd and 24th June, 1924, I beg to give below the quotations which we have received from four different manufacturing firms of England in 1919-22.

We are informed that (1) the total freight from Glasgow or any other British port to Calcutta is about £10,000 sterling on the above machinery, (2) that the approximate Government duty on cost is 2½ per cent., (3) that landing and forwarding charges are Rs. 3 a ton. (4) The railway freight from Calcutta to Lucknow with loading and unloading charges of Lucknow are over Rs. 20 per ton.

The cost of building and erection of the above new machinery are to be added to the above amount.

Any other information which you deem proper can be supplied from my head office at Lucknow if available.

*Quotations.*

1. James Millne & Sons, Limited, Milton House Works, Edinburgh.

Approximate cost of a complete paper mill plant, £125,000 sterling, f.o.b. Glasgow or other British port. Weight about 2,000 tons.

2. Boving & Co., Limited, 56, Kingsway, London, W.C.2.

Approximate cost of a new pulp and paper mill (excluding steam engine and drive) £88,500 sterling, f.o.b. Glasgow or other British port.

3. James Bertram & Sons, Limited, Leith Walk, Edinburgh.

Approximate cost of a complete paper mill plant (£68,847 plus 275--£69,122 sterling), f.o.b. Glasgow, or other British port.

4. Bentley and Jackson, Limited, Engineers, Bury, near Manchester.

Approximate cost of a complete paper mill plant £77,416 sterling, f.o.b. British port.



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## Enclosure F.

## THE UPPER INDIA COOPER PAPER MILLS COMPANY, LIMITED, LUCKNOW.

State next showing Profits and disbursement thereof since the years 1912 to 1923.

Half years ending on	Profits on paper manufacture.	Interest paid on mortgage debts, etc.	Net amount of profit after allowing interest on debts, etc.	Interest earned by the Coy. on investments.	Balance of Profits brought over from last 1/2 year's account.	Total Profits including last 1/2 year's brought forward balance.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
30th June 1912	34,935 11 7	3,442 11 2	31,592 0 5	..	955 0 0	31,547 0 5
31st December 1912	19,032 1 8	3,126 10 4	15,906 2 4	..	247 0 0	15,659 2 4
30th June 1913	26,366 1 9	3,676 10 1	22,690 2 8	..	27,132 7 4	52,032 10 5
31st December 1913	29,366 1 4	4,388 13 10	24,978 2 4	..	21,823 6 4	46,801 8 8
30th June 1914	29,366 1 4	4,113 2 11	25,253 1 5	..	16,734 5 5	41,987 6 10
31st December 1914	27,972 1 2	4,337 0 10	23,635 1 2	..	27,244 6 8	40,879 7 10
30th June 1915	25,254 0 2	3,695 4 9	21,559 5 3	..	32,921 6 7	34,077 1 9
31st December 1915	19,426 13 10	2,775 0 11	16,651 3 9	..	11,930 9 7	1,15,338 6 6
30th June 1916	1,11,073 12 0	1,352 0 0	1,07,721 12 0	870 15 8	14,043 1 11	1,22,668 10 2
31st December 1916	2,85,378 12 5	..	2,85,378 12 5	3,231 6 4	61,323 13 5	3,46,601 11 11
30th June 1917	2,65,134 1 10	..	2,65,134 1 10	8,880 4 16	6,475 9 4	2,73,609 6 10
31st December 1917	5,29,607 1 6	..	5,29,607 1 6	19,687 1 8	1,374 1 0	5,49,415 3 3
30th June 1918	5,09,043 15 19	..	5,09,043 15 19	..	..	..
31st December 1918	5,88,434 12 2	..	5,88,434 12 2	22,000 9 3	3,213 10 1	5,93,647 3 8
30th June 1919	4,90,665 6 1	..	4,90,665 6 1	25,822 1 0	2,07,965 10 7	7,84,653 1 8
31st December 1919	4,86,719 9 8	..	4,86,719 9 8	27,522 6 4	1,72,163 15 10	6,86,407 10 10
30th June 1920	5,06,466 5 11	..	5,06,466 5 11	25,225 6 3	6,309 9 1	5,45,547 5 9
31st December 1920	4,44,026 15 9	..	4,44,026 15 9	42,061 0 3	6,330 9 7	4,92,417 5 7
30th June 1921	2,53,919 10 4	..	2,53,919 10 4	40,864 5 4	1,158 11 7	3,04,892 11 3
31st December 1921	2,15,376 1 7	..	2,15,376 1 7	41,537 13 0	8,663 5 8	2,08,869 4 7
30th June 1922	1,07,337 1 8	..	1,07,337 1 8	48,826 2 1	22,602 11 1	1,58,825 14 10
31st December 1922	6,343 4 10	..	6,343 4 10	52,499 5 11	13,043 6 10	75,226 1 7
30th June 1923	10,032 15 3	..	10,032 15 3	42,253 6 3	8,826 1 7	61,112 1 3
31st December 1923	9,409 13 6	..	9,409 13 6	27,534 4 8	1,512 7 5	10,875 14 5

Loss caused by fire.

60,757 11 10

## Statement showing Profits and Disbursement thereof since the years 1912 to 1923—contd.

Half years ending on..	Amounts with- drawn from Reserve to meet depreciations ex- penditure of divi- dends, etc.	Total amount available for distribution of Dividends, Depre- ciation and Reserves.	DEPRECIATION						Dividend and bonus to the shareholders.					
			Machinery.			Buildings.				Furniture.				
			Rs.	A. P.	P.	Rs.	A. P.	P.						
30th June 1912	From "Renewal to Machinery," Rs. 8,000 0 0 From "Renewal to Machinery," Rs. 42,000 0 0	Rs. A. P. 50,847 0 5	Rs.	A. P.	P.	Rs.	A. P.	P.	Rs.	A. P.	P.			
31st December 1912		58,390 8 2	12,325	0	0	2,000	0	0	75	0	0	10,000	0	0
30th June 1913		52,032 10 5	8,521	5	6	3,526	4	8	90	12	5	20,000	0	0
31st December 1913		47,560 9 5	0,000	0	0	1,758	3	9	50	0	0	20,000	0	0
30th June 1914		66,165 9 10	12,221	1	10	2,074	7	9	35	4	0	24,000	0	0
31st December 1914		79,328 13 7	11,910	11	11	2,511	8	4	35	3	0	32,000	0	0
30th June 1915		94,977 1 9	11,000	0	0	2,000	0	0	105	3	0	32,000	0	0
31st December 1915		1,15,354 6 6	11,000	0	0	2,500	1	7	160	3	0	48,000	0	0
30th June 1916		2,24,088 10 2	11,000	0	0	2,542	2	6	100	13	0	61,000	0	0
31st December 1916		2,52,682 6 1	10,810	0	0	2,532	10	4	230	13	0	81,000	0	0
30th June 1917		4,53,069 11 11	10,400	0	0	2,503	11	9	442	0	0	1,50,000	0	0
31st December 1917		5,35,909 6 10	15,787	5	1	2,608	0	0	200	0	0	2,00,000	0	0
30th June 1918		5,29,175 9 2	15,450	10	11	2,530	14	3	360	0	0	2,00,000	0	0
31st December 1918		5,33,981 3 8	15,312	4	0	2,539	10	1	163	11	0	2,40,000	0	0
30th June 1919		7,81,553 1 8	13,700	0	0	2,555	9	10	331	8	0	2,40,000	0	0
31st December 1919		6,85,167 10 10	13,700	0	0	2,303	5	3	202	14	0	2,80,000	0	0
30th June 1920		5,15,517 5 9	13,700	0	0	2,512	10	8	200	5	6	1,00,000	0	0
31st December 1920	Profit on exchange rates. Rs. 71,509 15 0	4,92,167 5 7	12,379	0	0	2,063	11	0	185	12	0	2,00,000	0	0
30th June 1921		5,76,592 8 2	50,000	0	0	5,327	2	7	..	..	..	2,40,000	0	0
31st December 1921		2,68,890 4 7	50,341	4	9	5,493	4	0	..	..	..	1,60,000	0	0
30th June 1922		1,78,925 14 10	34,848	8	0	5,334	0	0	..	..	..	1,20,000	0	0
31st December 1922	From Dividend and Bonus E- Fund. Rs. 1,08,000 0 0	1,81,326 1 7	8,500	0	0	2,004	0	0	..	..	..	1,60,000	0	0
30th June 1923	" 50,000 0 0	1,31,112 7 3	5,000	0	0	2,000	0	0	..	..	..	1,20,000	0	0
31st December 1923	" 1,30,000 0 0	1,20,875 11 5	..	..	..	..	..	..	..	..	..	1,20,000	0	0
		3,71,252 1 6	65,936	7	11	2,787	3	5	..	..	..	31,60,000	0	0

## Statement showing Profits and disbursement thereof since the years 1912 to 1923—concl'd.

AMOUNTS TRANSFERRED FROM PROFITS TO RESERVES IN ORDINARY TYPES. AMOUNTS TRANSFERRED FROM RESERVES TO PROFIT IN ITALY.									
	Reserve Fund.	Reserve against Government Securities.	Bad and Doubtful Debts Fund.	Contin- gent Fund.	Stock and Stores De- preciation Fund.	Renewal to Machinery Fund.	Dividend and Bonus Equaliza- tion Fund.	Provident Fund for Em- ployees.	Bonus to Em- ployees.
	Balance Rs.	Balance Rs.	Balance Rs.	Balance Rs.	Balance Rs.	Balance Rs.	Balance Rs.	Rs.	Rs.
30th June 1912	3,00,000	..	17,687-0-10	..	..	50,000	..	..	..
31st December 1912	..	..	..	..	..	50,000	..	..	..
30th June 1913	..	..	..	..	..	42,000	..	..	..
31st December 1913	..	..	..	..	..	..	..	..	..
30th June 1914	..	..	..	..	..	..	..	..	..
31st December 1914	..	..	..	..	..	..	..	..	..
30th June 1915	..	..	312-15-2	..	..	..	..	..	..
31st December 1915	..	..	2,000	50,000	50,000	..	..	1,300	1,300
20th June 1916	..	..	47	..	..	..	..	2,000	2,000
31st December 1916	50,000	8,000	12,017	20,000	20,000	50,000	..	2,000	2,000
30th June 1917	..	12,000	..	..	..	..	..	..	..
31st December 1917	50,000	..	..	30,000	30,000	1,50,000	..	3,000	3,000
30th June 1918	50,000	..	..	40,000	40,000	1,50,000	..	4,000	4,000
31st December 1918	..	..	..	30,000	30,000	2,00,000	..	4,000	4,000
30th June 1919	1,00,000	..	..	..	..	2,50,000	..	6,000	6,000
31st December 1919	..	..	..	25,000	25,000	1,50,000	..	7,000	7,000
20th June 1920	20,000	..	..	..	..	2,50,000	..	..	..
31st December 1920	50,000	10,000	..	50,000	25,000	2,50,000	..	8,000	8,000
30th June 1921	25,000	..	..	..	..	1,60,000	..	7,250	7,250
31st December 1921	5,000	..	..	..	..	40,000	..	2,500	2,500
30th June 1922	1,00,000	..	..	50,000	..	20,000	2,00,000	5,000	5,000
31st December 1922	..	..	..	50,000	50,000	..	..	3,000	3,000
30th June 1923	..	..	..	..	..	..	1,05,000	2,000	2,000
31st December 1923	1,00,000	..	..	50,000	50,000	..	70,000	2,500	2,500
31st December 1923	5,00,000	80,000	30,000	50,000	1,00,000	11,20,000	73,000	65,750	65,750
							43,000		
							and interest on this amount.		

\* This amount was paid directly out of the Profits.

Balance  
carried  
forward

Rs. A. P.

\* Rs. 1,87,287-0-0  
on account of  
Excess Profits  
Duty and the  
Director's Fee  
thereon.

Rs. A. P.

\* Enclosure C.

*Statement showing the quantities of Raw Materials used during the years 1914, 1921, 1922 and 1923 for the Manufacture of Paper with rates and the prices.*

Name of Articles.	1914.			1921.		
	Quantity.	Rate.	Amount.	Quantity.	Rate.	Amount.
<b>A.—RAW MATERIALS—</b>	Md. Sr. Ch.	Rs. A. P.	Rs. A. P.	Md. Sr. Ch.	Rs. A. P.	Rs. A. P.
1. Rags . . . . .	46,906 20 0	1 9 0	73,318 5 1	35,097 20 0	2 14 11	1,06,024 9 8
2. Patnal . . . . .	25,869 2 0	1 7 9	38,473 10 3	31,937 8 0	2 11 2	86,091 9 0
3. Hemp Rope . . . . .	14,598 21 0	2 5 9	34,155 7 1	14,876 33 8	3 12 2	55,223 8 1
4. Bath . . . . .	49,251 4 0	1 2 10	58,033 15 4	37,090 24 0	2 9 11	97,367 2 1
5. Wood Pulp . . . . .	209 Bds.	22 3 9	4,580 11 0	..	..	..
6. Waste Paper . . . . .	..	..	..	3,753 31 0	2 8 1	9,421 10 7
7. Khaske and Jute cuttings . . . . .	..	..	..	2,445 24 8	2 14 1	7,047 10 0
			2,08,962 0 9			3,61,076 1 5
<b>B.—AUXILIARY RAW MATERIALS—</b>	T. C. Q. lb.			T. C. Q. lb.		
1. Bleaching Powder . . . . .	214 10 3 2	159 13 0	34,287 7 2	244 15 0 0	534 0 9	1,30,708 1 10
2. China Clay, English and Country . . . . .	219 0 0 2	77 8 3	16,976 3 1	226 8 0 0	189 3 3	38,308 8 10
3. Caustic Soda . . . . .	239 0 3 23	224 11 9	53,711 14 7	203 5 0 0	487 8 7	99,092 11 0
4. Eosin . . . . .	115 18 0 0	249 1 9	28,871 12 10	66 2 0 0	408 14 9	82,976 13 11
5. Soda Ash . . . . .	20 18 0 0	109 2 4	2,281 3 1	12 9 1 0	155 10 3	1,937 11 9
6. Alum Ferric and Sulphate . . . . .	285 14 3 24	124 12 0	35,617 6 0	400 18 2 0	203 13 1	81,712 3 9
7. Lime . . . . .	Md. Sr. Ch. 13,851 12 0	0 70 4	8,973 14 9	Md. Sr. Ch. 19,443 26 1	1 1 3	21,371 5 0
			1,50,749 13 6			4,03,109 8 1
<b>C.—POWER AND FUEL—</b>	T. C. Q. lb.			T. C. Q. lb.		
1. Coal . . . . .	14,155 16 1 2	10 3 9	1,44,809 3 6	14,949 2 1 0	18 1 9	2,70,721 12 7

Materials used in small quantities have been omitted.

Statement showing the quantities of Raw Materials used during the years 1914, 1921, 1922 and 1923 for the Manufacture of Paper with rates and the prices—continued.

Name of Articles.	1922.			1923.		
	Quantity.	Rate.	Amount.	Quantity.	Rate.	Amount.
A.—RAW MATERIALS—						
1. Rags . . . . .	32,280 5 0	2 15 1	64,985 8 4	23,358 36 0	2 14 7	69,968 5 2
2. Fatrual . . . . .	36,736 39 0	2 11 1	98,840 6 9	15,861 34 0	2 10 6	42,108 0 9
3. Hemp Rope . . . . .	11,450 36 0	3 13 6	43,903 12 5	13,617 31 0	3 13 8	52,504 2 1
4. Balb . . . . .	25,912 13 0	2 8 7	65,798 11 1	29,023 86 0	2 10 5	76,999 7 2
5. Wood Pulp . . . . .	3,925 4 0	2 3 4	9,671 9 1	2,052 8 0	1 14 6	3,019 0 8
6. Waste Paper . . . . .	1,771 3 0	2 12 8	4,048 6 4	379 0 0	2 13 1	1,067 14 3
7. Khakee and Jute cuttings . . . . .						
			3,17,127 7 0			2,44,710 14 1
B.—AUXILIARY RAW MATERIALS—						
1. Bleaching Powder . . . . .	131 1 2 6	40 6 6	52,624 10 1	141 11 1 0	293 14 1	41,509 0 0
2. China Clay, English and Country . . . . .	82 10 0 0	178 13 2	14,762 14 3	120 10 0 0	132 10 3	15,883 6 5
3. Caustic Soda . . . . .	135 5 0 0	481 14 0	65,173 15 5	184 0 0 0	377 1 6	69,384 12 9
4. Rosin . . . . .	46 16 0 0	472 11 6	22,123 7 4	43 4 0 0	340 12 8	14,722 7 3
5. Soda Ash . . . . .	25 16 0 0	164 15 0	4,789 15 3	10 18 0 0	145 7 1	2,021 5 11
6. Alum Ferric and Sulphate . . . . .	508 10 1 0	209 3 6	64,544 7 7	269 9 0 0	172 1 1	46,115 2 2
7. Lime . . . . .	17,631 28 0	1 2 8	20,642 5 10	11,230 12 0	1 0 5	11,356 13 8
			2,44,621 11 9			2,01,383 0 2
C.—POWER AND FUEL—						
1. Coal . . . . .	11,922 9 2 0	19 3 7	2,29,230 2 6	11,442 17 1 0	16 9 4	1,89,806 2 7

Materials used in small quantities have been omitted.



Enclosure H.

*Letter from the Upper India Couper Paper Mills Company, Limited, dated the 26th July 1924.*

In continuation of our letter No. 282-B, dated 11th July 1924, we have the honour to submit herewith a statement showing a sum of Rs. 14,03,945-11-5, which we had contributed (in reduced rates) to Government from 1914 to 1923.

If details related to the above statement are required we shall be glad to forward them.

Hoping to be excused for the delay.



Comparative statement showing our Bazar rates and the reduced rates charged to Government Departments from 1914 to 1923.

No.	Name of Departments.	Amount of rates prevailing in Bazar at the time of supplies.			Amount of reduced rates at which paper supplied.			Difference.		
		Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
1	Railway Department . . . . .	11,73,001	11	2	9,18,031	8	10	2,54,970	2	4
2	Director. Land Records . . . . .	4,00,516	13	0	3,16,876	8	2	83,640	4	10
3	Controllor of Stationery . . . . .	31,50,056	5	4	23,61,235	13	2	7,89,720	8	2
4	Board of Revenue . . . . .	1,63,488	15	0	1,26,167	1	4	37,321	13	8
5	Commissioner of Settlement, Central Provinces . . . . .	1,57,433	14	6	1,29,649	0	4	27,784	14	2
6	Superintendent, Stationery, Madras . . . . .	92,357	4	0	48,554	10	4	43,802	9	8
7	Superintendent, Government Press . . . . .	2,72,662	12	0	1,99,837	13	10	72,824	14	2
8	Jail Department . . . . .	46,487	8	0	44,296	14	0	2,190	10	0
9	Census Department . . . . .	1,88,732	10	1	1,37,534	0	10	51,198	9	3
10	Indian Munition Board, Calcutta . . . . .	1,087	8	0	775	0	0	312	8	0
11	Controllor of Contract, Simla . . . . .	24,694	8	0	17,905	0	0	6,789	8	0
12	Punjab Publicity Committee . . . . .	99,067	5	0	66,177	15	10	32,889	5	2
13	Editor, War Journal . . . . .	20,666	10	8	20,166	10	8	500	0	0
	TOTAL	57,91,153	12	9	43,87,208	1	4	14,03,945	11	5

## APPENDIX A.

Statement showing the total expenditure of the production of paper during years.

Question No. 109. FORM I.

Particulars.	1914.		1921.		1922.		1923.	
	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.
1. Primary raw materials . . . . .	2,06,113	13 10	3,61,746	5 9	3,17,813	13 8	2,45,349	10 11
2. Purchased pulp . . . . .	4,580	11 0	..	..	..	..	..	..
3. Auxiliary raw materials . . . . .	1,84,578	0 1	4,15,250	1 1	2,46,901	3 4	2,08,139	5 1
4. Labour and Establishment (which includes of Mill Labour European and office staff.)	1,19,675	4 6	2,71,640	8 7	2,75,934	7 0	2,21,936	15 5
5. Power and Fuel (Coal) . . . . .	1,44,969	3 6	2,70,721	12 7	2,29,230	2 6	1,89,806	2 7
6. Ordinary current repairs and maintenance of building, plant and machinery.	91,364	14 0	2,11,145	12 3	1,67,676	9 3	1,38,549	14 9
7. General services, e.g., Income-tax, Freight on paper, General charges, postage stamp, Audit fee, Directors' Commission, etc.	67,269	3 2	2,67,189	5 6	1,89,680	9 11	1,34,229	10 10
8. Miscellaneous, e.g., rent, Municipal taxes, assurance, etc.	5,502	12 0	16,986	0 1	13,812	9 10	16,338	0 4
9. Nil . . . . .	..	..	..	..	..	..	..	..
TOTAL . . . . .	8,23,993	14 1	19,14,679	13 10	14,41,051	8 0	11,54,349	11 11
Output in Lbs. . . . .	6,195,635		5,813,009		5,194,096		3,795,955	

## APPENDIX B.

Showing the Works cost per ton of finished paper.

## QUESTION No. 109. FORM No. IV.

	1914.	1921.	1922.	1923.	The following remarks refer to the high percentage in the cost for the year 1923.
1. Raw Materials . . . . .	Rs. 74-52	Rs. 139-4	Rs. 137-04	Rs. 144-75	....
2. Purchased bleached pulp . . . . .	1-05	..	..	..	....
3. Auxiliary raw materials . . . . .	66-73	160-02	106-47	122-79	Superior quality paper manufactured.
4. Labour and Establishment . . . . .	43-23	104-65	118-99	130-93	On one machine.
5. Power and Fuel . . . . .	52-38	104-32	98-85	111-98	Shortness of coal.
6. Ordinary current, repairs and maintenance of building, plant and machinery.	33-02	81-36	72-29	81-73	....
7. General services, etc., Income Tax, Freight on paper, General charges, postage stamps, Audit fee, Directors' Commission, etc.	24-32	102-06	81-79	79-19	Income Tax.
8. Miscellaneous. e.g., rent, Municipal taxes, assurance, etc.	1-89	6-54	5-95	9-63	More fully insured-Octroi also new tax levy.
9. Any other charges . . . . .	..	..	..	..	....
TOTAL . . . . .	297-84	690-25	621-38	681-00	

## THE UPPER INDIA COUPER PAPER MILLS COMPANY, LIMITED.

B.—ORAL.

### Evidence of Mr. SAYYID NABI-ULLAH and Mr. GOBARDHAN PERSHAD, recorded at Simla on Monday, the 23rd June 1924.

*President.*—In answer to question 5 you say that the full capacity of your mills, as at present equipped, is 13 tons of paper daily.

*Mr. Nabi-Ullah.*—Yes.

*President.*—Are the mills worked right through the week?

*Mr. Nabi-Ullah.*—Except on Sundays. We close on Saturday afternoon at 6 o'clock and re-open on Monday at 6 A.M.

*President.*—You work only 6 days in the week?

*Mr. Nabi-Ullah.*—Yes.

*Mr. Ginwala.*—Is it not a continuous process?

*Mr. Gobardhan Pershad.*—We have to stop on Sundays. We have to clean the steam boilers every Sunday, and the Factory Act does not allow us to work.

*Mr. Ginwala.*—Don't you work in shifts?

*Mr. Nabi-Ullah.*—Yes. We do.

*Mr. Ginwala.*—During the week don't you work 24 hours?

*Mr. Nabi-Ullah.*—We get them to work 10 hours a day.

*Mr. Ginwala.*—How many shifts have you in a day?

*Mr. Nabi-Ullah.*—Two.

*Mr. Ginwala.*—That does not give 24 hours work.

*Mr. Nabi-Ullah.*—No; we give the men 2 hours rest. But we keep extra men. Supposing in one department we require 30 men; we keep 36. These 6 men work for one hour after 6 hours.

*President.*—What is the equivalent in tons per annum of your daily output?

*Mr. Gobardhan Pershad.*—We are working 284 days per annum; it would be about 3,600 to 3,700 tons.

*President.*—You very nearly attained that output in 1906.

*Mr. Nabi-Ullah.*—Yes.

*President.*—That is apparently the year of highest output. Even during the war you did not succeed in attaining that output again.

*Mr. Nabi-Ullah.*—No.

*President.*—Is there any particular reason for that? During the war, I take it, you could sell all the paper you could make. There was no limitation of the market therefore, but was there any limitation of your capacity to produce?

*Mr. Gobardhan Pershad.*—We are not prepared to assign any reason.

*President.*—In answer to question 7 you say that your mill is advantageously situated in certain respects.

*Mr. Nabi-Ullah.*—Yes, it is on the banks of a river; water is there; grass is somewhere as near as we can get it. We cannot go to the grass because then the coal will be too far from us. If we go to the coal, the grass will be too far. Having regard to everything we think we are centrally situated.

*President.*—In answer to point (b) as regards coal, you say "Yes, to a certain extent." You mean you might be nearer to the coal, but if you were, you would be further off from the grass and other things?

*Mr. Nabi-Ullah.*—Exactly.

*Mr. Ginwala.*—You get your coal from the Bengal coalfields?

*Mr. Nabi-Ullah.*—Yes, but latterly we have got a little from the Central Provinces.

*President.*—Are you more certain of punctual delivery if you get coal from the Central Provinces?

*Mr. Nabi-Ullah.*—There is no trouble now of delivery.

*President.*—Your answer to the last part of question 7 comes to this, that you have got to weigh all these factors and balance one against the other in selecting a suitable site for a paper mill. You think that on the whole at Lucknow you are not badly off.

*Mr. Nabi-Ullah.*—I should say no.

*President.*—Is it better than Cawnpore, for instance?

*Mr. Nabi-Ullah.*—I should think so.

*President.*—Can you tell us why?

*Mr. Nabi-Ullah.*—The freight on the grass is cheaper. Unless the mill is right on the banks of the Ganges it won't be near water at Cawnpore. Then we are very near the Railway station and therefore materials come cheaper in Lucknow than in Cawnpore, also labour is cheaper. Of course as regards coal we are at a slight disadvantage. We have got to pay more freight than Cawnpore would.

*President.*—I am not sure that I understand your answer to question 9. Does it mean that in your opinion India is equally advantageously situated for the manufacture of any class of paper? You say "they should be classified as (a) good, (b) medium or (c) inferior. All the three, (a), (b) and (c), can be made in India." What we were trying to get at was a suggestion made by one witness, possibly Sir Willoughby Carey, before the Fiscal Commission, that most of the paper manufactured in India fell under two of these classes, and what we wanted to find out, with regard to the future of the industry, was whether manufacturers in India will be able to cover the whole ground. I rather understood that there are some kinds of paper which could not be manufactured in India.

*Mr. Nabi-Ullah.*—That is quite true. I am afraid we misunderstood this question. We thought 'light' or 'watermarked' would be first class paper. Medium will be white printings or something like this, and inferior will be badami, brown cartridge paper or something like these.

*President.*—Looking at the paper trade broadly, and dividing the paper manufactured in the world into three classes in a rough general way, would you say that the best paper you make would be classified as good?

*Mr. Nabi-Ullah.*—Medium. Certainly not the very best quality.

*President.*—What is the reason? Why is it difficult to make the best quality of paper in India?

*Mr. Nabi-Ullah.*—It requires more elaborate machinery and the latest improvements; then, we do not get such good raw materials as would be required for the best paper.

*President.*—And of course there is also the further point that the total consumption of this quality of paper in India is very small. It may not be worth while for a business firm to incur the initial expense of installing the necessary machinery.

*Mr. Nabi-Ullah.*—Yes. Moreover, in England it is cheaper to get better cuttings of limes and so on, which are required for the best quality of paper. Here we get dirty rags only and that also with difficulty.

*President.*—In answer to question 10 you say "We make a larger variety of papers than a single manufacturer in Western countries commonly does,

owing to the nature of demand by the public." I want you to amplify this statement a little.

*Mr. Nabi-Ullah.*—I think there is some sort of understanding in Europe that certain mills would like to make certain kinds of paper.

*President.*—But still you have got to explain why in England the understanding arose and why in India it didn't?

*Mr. Nabi-Ullah.*—Well, take the legal profession here. In England you go to a lawyer, if it is a civil case and he is a criminal lawyer, he won't touch it. Here in India you go to a Muhammadan lawyer and he will accept a case of Hindu law, though he may have little knowledge of it.

*President.*—Can you quote a specific example of a firm in England that confines itself to a particular manufacture?

*Mr. Nabi-Ullah.*—This is not our personal experience; but that is the general idea we gathered from the Trade Papers and Reviews.

*President.*—Supposing it was suggested to your firm that you should specialise in some particular class of paper?

*Mr. Nabi-Ullah.*—We won't do it.

*President.*—Why not?

*Mr. Nabi-Ullah.*—Because we feel we won't be able to make any profit. The thing is, we have got agencies throughout the Provinces and they have got something like retail shops in every city. They have got to keep all kinds of paper in order to make up their collection for sale. Unless they keep all kinds of paper they find it difficult to sell, because they do not keep other makes along with ours. For example, in the Native States and big cities when they call for tenders, they want one person to supply all qualities of paper.

*President.*—Is it not a fact also that there is not a very large market in India for any one class of paper?

*Mr. Nabi-Ullah.*—I do not know.

*President.*—Take any particular class of paper: if you could command the whole of India, the demand might be enough to keep one mill making nothing else. But considering the size of India, one mill cannot cover the whole of the country. For example, how could you sell at Tuticorin or, say, Dibrugarh?

*Mr. Nabi-Ullah.*—Take a particular area. Suppose there are 20 machines in India, each one of them could undertake one particular kind of paper, I expect.

*President.*—What is the total consumption of paper in India?

*Mr. Gobardhan Pershad.*—About 85,000 tons, I think.

*President.*—Well I have suggested this point to you, and it is for you to say what you think about it.

*Mr. Nabi-Ullah.*—Even Government order different kinds of paper. If different mills specialise in different kinds of papers, the Government will go to the specialising mills for the particular kind of paper, I think.

*President.*—I am not suggesting to you that you ought to specialise, but I was merely trying to go into this question a little deeper. What I am suggesting is that until the total consumption of paper increases a good deal, it does not seem to me likely that any Indian mill will be able to specialise very much. Are you prepared to express an opinion on this? If you have anything to say on the point we shall be very glad to hear it.

*Mr. Nabi-Ullah.*—If the production comes up to 80,000 tons, I suppose it is possible to specialise.

*President.*—At Lucknow you may not be able to keep your mill employed on paper of one special kind, because the demand for that kind within an economic radius of your factory would be insufficient. But if you were located in a place like Calcutta, where there is a relatively large local demand

it might be possible. If you like to think it over and let us know about it later on, you can do so.

*Mr. Nabi-Ullah.*—Very well.

*Mr. Ginwala.*—What is the smallest quantity that you can manufacture economically of one quality at a time? If you got an order for, say, 2 tons would it pay you?

*Mr. Nabi-Ullah.*—Yes, on special rates. It won't be an economical production.

*Mr. Ginwala.*—The smaller the quantity you have to manufacture at a time, the higher the cost of production, that is the difficulty to which the President is trying to draw your attention.

*Mr. Nabi-Ullah.*—Yes.

*Mr. Ginwala.*—You have got to manufacture many qualities in small quantities, is not that the position?

*Mr. Nabi-Ullah.*—That is so. But then it depends so much on our agents. We have got small agencies all over the country. One man says 'I would like to have blue paper' but he wants only one or half a ton; we cannot start work, but if two or three agents put in orders for the same quality of paper we do it.

*President.*—Of your raw materials rags are nearly a third, hemp and jute come to about another third, and grass is about a third also?

*Mr. Nabi-Ullah.*—Yes.

*President.*—The quantity of waste paper required is small, almost negligible in fact?

*Mr. Nabi-Ullah.*—That is no.

*President.*—But of the other three (taking hemp and jute together as one) approximately an equal quantity of each is required.

*Mr. Nabi-Ullah.*—Yes.

*President.*—In answer to question 14 you say "For 1 ton of unbleached pulp about 2½ tons of primary raw materials are required," and in answer to question 15, namely "What quantity of each of the primary raw materials is required for the production of one ton of finished paper" you say "do. do." I am afraid I do not understand that.

*Mr. Nabi-Ullah.*—2½ ton of primary raw material will make one ton of unbleached pulp or 1 ton of finished paper.

*Mr. Ginwala.*—There is no loss in the stage between pulp and paper?

*Mr. Nabi-Ullah.*—There is very little difference.

*President.*—There is no further loss after the pulp stage?

*Mr. Nabi-Ullah.*—No.

*President.*—It would read better if you had said "For one ton of unbleached pulp, or one ton of finished paper, about 2½ tons of primary raw materials are required."

*Mr. Nabi-Ullah.*—That is so.

*President.*—In answer to question 17 you say you draw your primary raw materials from different places. Which raw materials?

*Mr. Nabi-Ullah.*—Rags, hemp, jute from the United Provinces, the Punjab, Rajputana and the Central Provinces, grass from the Nepalganj Forests, the Kheri Forests and the Dehra Dun Forests.

*President.*—You are referring only to the hemp and jute and the grass?

*Mr. Nabi-Ullah.*—Hemp and jute come from the same places, the United Provinces, the Punjab, Rajputana and the Central Provinces.

*President.*—And the grass?

*Mr. Nabi-Ullah.*—From the three forests, Nepalganj, Kheri and Dehra Dun.

*President.*—Then as regards rags you can hardly say that they come from any one place. So to speak rags are not natural products!



*Mr. Nabi-Ullah.*—We do not go to the bazar for it. We have got agents who collect these for us.

*Mr. Ginwala.*—Does hemp and jute mean clean hemp and jute?

*Mr. Nabi-Ullah.*—No. Our contractors have to employ men to pick up these things, old gunny bags and things like that, from all sorts of places.

*President.*—Let us concentrate on definite natural products. How far are the Nepalganj Forests from Lucknow?

*Mr. Nabi-Ullah.*—A little over 200 miles.

*President.*—And the Khari Forests?

*Mr. Nabi-Ullah.*—About the same.

*President.*—And the Dehra Dun Forests?

*Mr. Nabi-Ullah.*—Will be about 400 miles.

*President.*—Are these the forests where you have always been obtaining your grass from, or, since the mill was established, have you changed your sources of supply?

*Mr. Nabi-Ullah.*—We have changed in this sense: first of all we were getting from Nepalganj a very superior kind of grass, but then the competition came in. The Bengal Mills came up as far as Nepalganj for their grass. Then we did not get that grass cheaply. Sometimes we did not get it at all, and if I may use such an expression 'they kicked us out.' So, we had to go and look for fresh forests. We came into the forests in the plains at Khari and Dehra Dun and the grass there is not so very good as it was at Nepalganj.

*Mr. Ginwala.*—It seems that you use very little of it as your raw material. Grass is only about 30 per cent.; so you can hardly say it is your primary raw material.

*Mr. Nabi-Ullah.*—We use about 50,000 maunds.

*President.*—You have told us that for 1,800 tons of output you require 1,125 tons of Sabai grass. That is your own statement. That is all we know.

*Mr. Ginwala.*—Let me put it this way. The total quantity of raw materials required is 3,687 tons.

*Mr. Nabi-Ullah.*—Yes, for 1,800 tons of output, but that is not our full capacity.

*Mr. Ginwala.*—But the proportion is the same. Of the total quantity, less than a third is grass, so that it can hardly be said that your natural resources are fully utilised.

*Mr. Nabi-Ullah.*—Our present output being 1,800 tons, we use only 1,125 tons of Sabai grass, but when we come to the full capacity of 3,000 tons we would purchase 1,875 tons of grass.

*President.*—But the proportion is the same.

*Mr. Ginwala.*—It is only 30 per cent. One of the conditions, as you know, laid down by the Fiscal Commission and accepted by the Government and the Legislative Assembly, is that any industry that wants protection must have certain natural advantages.

*Mr. Nabi-Ullah.*—Yes.

*Mr. Ginwala.*—In your case, one thing that is naturally produced is grass.

*Mr. Nabi-Ullah.*—Yes.

*Mr. Ginwala.*—And of that you are only able to use 30 to 31 per cent., so that it can hardly be said that it fulfils that condition.

*Mr. Nabi-Ullah.*—Quite so.

*Mr. Ginwala.*—You have got to depend on hemp, jute and rags which are not natural products.

*President.*—At least they are natural products at the second remove.

*Mr. Ginwala.*—Ordinarily the yield from your grass is about 45 to 50 per cent.

*Mr. Nabi-Ullah.*—It is less than the yield from other raw materials.

*Mr. Ginwala.*—But it ought to be cheaper. Rags cost Rs. 75 a ton, whereas grass costs less. I want to know this. Do you use these other raw materials because you find some difficulty in getting your natural raw material which is the Sabai grass, or is it because you require these other materials for special qualities of paper? Why is it that you use such a small percentage of grass and such a high percentage of the other materials?

*Mr. Nabi-Ullah.*—Rags and hemp are a little cheaper to us than grass.

*Mr. Ginwala.*—Because you get a bigger yield?

*Mr. Kishenlal.*—The initial price of grass is small but we have to use more chemicals. In the case of other materials, we use less chemicals. We have to use grass for certain classes of paper, but in the common paper we use more of rags and less of grass. All these three materials are not used for only one kind of paper.

*President.*—Let me put it to you this way. Do these relative proportions of the different materials differ from your pre-war practice, or are they much the same?

*Mr. Nabi-Ullah.*—About the same.

*President.*—For a long time past you have been manufacturing very much the same kind of paper as you are manufacturing now?

*Mr. Nabi-Ullah.*—Always the same kinds of paper.

*President.*—There has been no particular change in this respect?

*Mr. Nabi-Ullah.*—None.

*President.*—In your answer to question 18, you say "We employ contractors to supply us the above primary raw materials"; that is to say, in the case of grass, your contractor has his own arrangements with the Forest people?

*Mr. Nabi-Ullah.*—Yes.

*President.*—You are not concerned with it?

*Mr. Nabi-Ullah.*—No, we are not concerned.

*President.*—You merely ask him to deliver to you so much grass?

*Mr. Nabi-Ullah.*—Yes.

*President.*—For that reason you are not in a position to tell us really anything about the conditions in the forests?

*Mr. Nabi-Ullah.*—That is so.

*President.*—I would only just like to remind you again of what Mr. Ginwala suggested as to the importance of ascertaining that there is an adequate supply of raw materials for the manufacture of paper in India if the industry is to develop. I gather that, in the case of rags, for instance, you have got to take some trouble to get them?

*Mr. Nabi-Ullah.*—Yes.

*President.*—And the supply is not unlimited either?

*Mr. Nabi-Ullah.*—The supply is precarious.

*President.*—A doubt has been suggested about the adequacy of the supply of grass in the quotation from Mr. Pearson's evidence which we gave in the questionnaire. I want to explain to you that it is a point which we have got to consider and satisfy ourselves about, but I gather that you are not in a position to say anything on that?

*Mr. Nabi-Ullah.*—We could not tell you very much about it, but we are informed that grass is available for the mills that are working in India.

*President.*—I notice in your answer to question 20, the price of waste paper has gone up 233 per cent. since 1913-14.

*Mr. Nabi-Ullah.*—It has not gone up in that sense. It is not a marketable commodity. Some offices have got some waste paper and they ask us "Will you buy these and, if so, what will you pay."

*President.*—I don't know whether you are buying the contents of the Secretariat waste paper baskets. They sometimes sell.

*Mr. Nabi-Ullah.*—Not much.

*President.*—I notice that the cost of grass has gone up by 130 per cent., whereas the prices of other things have gone up by 70 to 75 per cent.

*Mr. Nabi-Ullah.*—Yes.

*Mr. Ginwala.*—What is 'Patmal'?

*Mr. Nabi-Ullah.*—It is jute.

*President.*—There again it is rather important that the cost of grass is going up very heavily.

*Mr. Nabi-Ullah.*—Many years ago, our contractor approached the Nepal Durbar. The Durbar were then willing to accept whatever they could get for their grass, because to them it was of no value at all. The down country mills people came to know where our grass came from, and they approached the Nepal Durbar who at once realised that it was of value and that it was worth something.

*Mr. Ginwala.*—Is your mill older than the Titaghur Mill?

*Mr. Nabi-Ullah.*—We started in 1879, but the mill began to work in 1882. We are now 42 years old. Perhaps we are almost of the same age.

Then there is another reason for the grass being more expensive. We have now got to go further into the field to get our grass. First of all it was just at the bottom of the hill. Then we could cut and bring as much as we liked. Now we have to go up higher and higher and the cost of transport is also going up. This is only our conjecture.

*Mr. Ginwala.*—That is what Mr. Pearson has said in his note.

*President.*—On that basis it does not seem that the production of paper in India can expand very much. If there were a rapid expansion in production, there would be a very rapid increase in the price of the raw material. That is where the difficulty comes in.

*Mr. Nabi-Ullah.*—We cannot say anything about that.

*President.*—Our duty is to bring this to the notice of the manufacturers so that they may have full opportunity of saying anything that can be said on the other side. That is the importance of it just now.

*Mr. Nabi-Ullah.*—We cannot express any opinion.

*Mr. Ginwala.*—According to Mr. Pearson, there is no room for expansion if you depend entirely on Sabai grass.

*Mr. Nabi-Ullah.*—We are not in a position to contradict him, but we don't agree. That is our position.

*President.*—It is rather necessary, if you wish to rebut that opinion, that you should be able to give reasons on the other side.

*Mr. Nabi-Ullah.*—Quite right, but we have no data, that is because we do not go to the forests ourselves. Our contractors do. But they assure us that they have ample resources to supply our present and future needs at reasonable rate.

*Mr. Gobardhan Pershad.*—Mr. Raitt has published a book.

*Mr. Ginwala.*—We are now concerned with the Sabai grass which is principally used. Mr. Pearson's case is this. I don't think that Mr. Raitt differed from him. What Mr. Raitt says is that it is not necessary to depend solely on Sabai grass because there are other grasses. We are not dealing with those grasses just now. We find that most of the factories use chiefly Sabai grass, and the question then arises, is there a sufficient quantity of Sabai grass to justify any protection that may be given?

*Mr. Nabi-Ullah.*—I submit that we are not in a position to make any statement on that point. We have never been out of Lucknow. We rely on the contractors. We advertise and tenders are put in.

*Mr. Kale.*—You have not paid any attention to this aspect of the question?

*Mr. Nabi-Ullah.*—No.

*Mr. Kale.*—When you are finding it more and more difficult to secure your raw materials, you have never considered what the prospects are, what the limitations are, and so on?

*Mr. Nabi-Ullah.*—Not at all.

*President.*—I notice you say in answer to question 23 that there has been a gradual diminution of the supply of rags in certain areas from which you have been getting them.

*Mr. Nabi-Ullah.*—Yes.

*President.*—To what cause do you ascribe this?

*Mr. Nabi-Ullah.*—Because of the poverty, people have not got enough money to purchase new dhotis, etc., so many times a year.

*President.*—I imagine that during and immediately after the war that was the case.

*Mr. Nabi-Ullah.*—That was so, even now. Dhotis which could be bought for a rupee cost two rupees now.

*Mr. Ginwala.*—Do they wear them longer?

*Mr. Nabi-Ullah.*—Therefore to get their money's worth, they wear longer and we get them now in a threadbare condition. In pre-war days, we had good stuff coming in.

*President.*—As regards your reply to question 31: the question was "Apart from Sabai grass are there any other grasses in India which are suitable for pulp manufacture" and you say "Paddy, straw, Ulla grass, Moonj are suitable for pulp manufacture." The point is, have you ever tried them yourselves?

*Mr. Nabi-Ullah.*—We have tried them, but we would like to tell the Board that Moonj is a very good substitute, but it comes very expensive. It wants a lot of chemicals to boil it down to the pulp condition.

*President.*—Moonj is the one you tried?

*Mr. Nabi-Ullah.*—We tried paddy straw also. There is not enough substance in that. There is a lot of substance in Moonj but the cost of boiling it is too much.

*President.*—As far as you are concerned, you have not been able to satisfy yourself that these materials can be used on a large scale? I am not suggesting that you deny that they can be used, but that your experience has not supplied any evidence in favour of them yet.

*Mr. Nabi-Ullah.*—Our experience shows that Moonj and Paddy straw cannot be used economically. With regard to paddy straw, there is not sufficient substance. With regard to Moonj, it wants a lot of chemicals to boil it down. Sabai is the cheapest.

*President.*—In reply to question 38 regarding auxiliary raw materials, you have given us a table showing the country of origin, f.o.b. price, port of importation, etc. But in the column headed Customs duty you have merely put 15 per cent. What we wanted to get at, if possible, was the actual amount you pay upon one ton, whatever it is. You merely say 15 per cent. I don't know what that 15 per cent. is calculated on, whether it is on a tariff valuation or on the invoice value. If it is an *ad valorem* duty, it will be charged on the c.i.f. price, but it may be a tariff valuation. In that case, it is different.

*Mr. Nabi-Ullah.*—Our Accountant says that it is on the invoice price.

*President.*—In answer to question 38 (b) you say that you purchase rosin made at Bhawali by the Indian Turpentine and Rosin Company. Do you find that rosin satisfactory?

*Mr. Nabi-Ullah.*—Quite good.

*President.*—I have heard it suggested that the Indian rosin is not satisfactory for paper manufacture.

*Mr. Nabi-Ullah.*—We find it satisfactory.

*President.*—Have you been using it for some time?

*Mr. Nabi-Ullah.*—About 4 or 5 years.

*President.*—You have had no difficulty?

*Mr. Nabi-Ullah.*—No, before that we were using American rosin.

*President.*—Is it cheaper than the imported rosin?

*Mr. Nabi-Ullah.*—Cheaper and equally good.

*President.*—That is important.

*Mr. Ginwala.*—You say that you do not make your own chemicals?

*Mr. Nabi-Ullah.*—We do not manufacture chemicals.

*Mr. Ginwala.*—Why do you require so much lime? You get your caustic soda from abroad.

*Mr. Nabi-Ullah.*—For boiling rags, we require lime.

*Mr. Ginwala.*—It is a very large quantity you use?

*Mr. Nabi-Ullah.*—We use it for bleaching.

*Mr. Ginwala.*—What do you use caustic soda for?

*Mr. Nabi-Ullah.*—We boil the Sabai grass with caustic soda and the rags, jute and hemp with lime.

*Mr. Ginwala.*—You boil rags, jute and hemp with lime only?

*Mr. Nabi-Ullah.*—Yes, we don't use any caustic soda.

*Mr. Ginwala.*—Do you boil these separately?

*Mr. Nabi-Ullah.*—Yes.

*Mr. Ginwala.*—Then, what do you do?

*Mr. Nabi-Ullah.*—We break them and make them into pulps and after making them into pulps, we mix them. We treat them separately till they are made into pulps.

*Mr. Ginwala.*—Is it the ordinary process?

*Mr. Nabi-Ullah.*—Yes, in boiling we use lime or caustic soda. After that we wash it, bleach it and make it into pulp.

*Mr. Ginwala.*—You take a certain percentage of each kind then.

*Mr. Nabi-Ullah.*—Yes, after it has been made into pulp.

*President.*—In reply to question 39, viz.: "Which of the auxiliary raw materials, if not already manufactured in India, are likely to be manufactured," you say that China clay is already manufactured. I think that the Titaghur Mills had found a source of China clay in Chota Nagpur, but I gathered that they were not satisfied with the quality. It is quite true that China clay is produced in India, but it is not yet clear that it is much of a success.

*Mr. Nabi-Ullah.*—We tried some of that and we were not quite satisfied.

*President.*—Do the Titaghur Mills make bleaching powder?

*Mr. Nabi-Ullah.*—I think so, they make bleach liquor.

*President.*—You say that caustic soda is made in India.

*Mr. Nabi-Ullah.*—It is already made in India. Magodhi Soda Co. make it.

*President.*—Who manufactures alum?

*Mr. Nabi-Ullah.*—Bengal Chemical Works.

*President.*—In answer to question 44, you say "we employ 3 expert supervisors at present." Are these brought from abroad?

*Mr. Nabi-Ullah.*—Yes.

*President.*—Are they men of the foreman class or higher?

*Mr. Nabi-Ullah.*—They are lower than foremen. They are what we call paper-makers in charge of beaters, and they are machincmen. There are two different departments in a mill, viz., beating room and machine room.

*President.*—Have you got these three men?

*Mr. Nabi-Ullah.*—Yes.

*President.*—That is all you have?

*Mr. Nabi-Ullah.*—Yes, at present. First of all the whole mill was manned by European staff. The manager, foreman, beatermen, machinemen and engineer were all Europeans. Then we started training our own apprentices. Our present manager is one of our apprentices who started on Rs. 16 a month. We are gradually dispensing with the imported staff.

*President.*—I am very glad you have mentioned it, but in your answer to question 46 you say "we never had imported labour."

*Mr. Nabi-Ullah.*—This question was misunderstood at the office. What we mean is that we don't import coolies from abroad.

*President.*—It would be a good answer to the first sentence of question 46 "What progress has been made since the factory was established in the substitution of Indian for imported labour," if you could give—intervals of, say, 5 years—the number of imported workmen—Europeans or Americans—employed in any capacity in the works.

*Mr. Nabi-Ullah.*—I have been away. I only dropped in for an hour or so at the office. I had left a note asking the office to prepare a statement showing how we started with European staff and how we gradually substituted Indians for them.

*Mr. Ginnala.*—The Assembly is particular about finding how much Indian labour is employed, and therefore it will be to the advantage of every industry to point that out.

*Mr. Nabi-Ullah.*—We will send you a statement later on. Shall we give it from the very beginning?\*

*President.*—If you can give it from the beginning so much the better.

*Mr. Nabi-Ullah.*—We shall tell you when we began to put Indians in charge of machine and beating departments and show the diminution in the number of Europeans, etc., and increase in the number of Indians employed.

*President.*—I see there has been a very heavy increase in the wages of Indian labour before the war—something like 147 per cent.

*Mr. Nabi-Ullah.*—Yes. That is so.

*President.*—In answer to question 51 you say "The Indian skilled labourers improve with training and compare very favourably with workmen in the Western countries, provided we could afford better wages for them." You have given, since 1914, an increase in wages a great deal more than the rise in the cost of living. Have you noticed any increase in efficiency in consequence? What it comes to is this: In answer to question 51 the opinion is indicated that provided you raise the wages you could get more efficient work. You have in fact raised the wages: I want to know whether you have got more efficient work. The cost of living has risen by 75 per cent, and you have given an increase of about 140 per cent.

*Mr. Nabi-Ullah.*—We would like to say that the Indian labour does improve with training. With regard to the labour here I take it it meant cooly labour and not the engineer or the manager?

*President.*—Both equally. The question is "Has it been found that the Indian labourer improves with training?" Your answer is "Yes". The next question is "How does his efficiency compare with that of workmen in Western countries employed in similar work?". Usually one very good test of the efficiency of labour in different countries is how many men are employed in each country to do the same job.

*Mr. Nabi-Ullah.*—There is skilled and unskilled labour. With regard to unskilled labour we know absolutely nothing about the statistics in Europe. We plead complete ignorance in this matter. With regard to skilled labour I think it makes no difference. If he is a machineman, for instance, he does the same work, 12 hours—whether here or in England.

*President.*—If you have no practical experience of conditions in European countries, or have not got the statistics you are not in a position to answer the question.

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\* *Vide Statement II (a).*

*Mr. Nabi-Ullah.*—Exactly.

*Mr. Ginwala.*—In your case you really do not require much expert labour for this reason that you are not manufacturing your own chemicals, for chemicals require a good deal of expert knowledge. The rest practically resolves itself into mechanical knowledge of machinery.

*Mr. Nabi-Ullah.*—Yes.

*Mr. Ginwala.*—Of course I admit you require a certain amount of chemical knowledge just to know how much chemical to put in connection with a process but that is comparatively—

*Mr. Nabi-Ullah.*—Yes: that is merely mechanical.

*Mr. Ginwala.*—That is why you are not in a position to compare, and in your case you find the work done by the Indian mechanic quite as good as that of the imported mechanic.

*Mr. Nabi-Ullah.*—Yes.

*President.*—The real point is that question No. 51 can only be answered by somebody who knows conditions in Europe.

*Mr. Nabi-Ullah.*—What we submit is this: We divide labour into two classes, skilled and unskilled. Regarding unskilled labour we can say nothing as to how much work is done by men in England. With regard to skilled labour we think there is no difference.

*President.*—Have you found that the substantial increase in pay has resulted in greater efficiency?

*Mr. Nabi-Ullah.*—The increase in pay in the case of Indians—

*President.*—I simply put this point whether this substantial rise in pay has been accompanied by increased efficiency.

*Mr. Nabi-Ullah.*—No.

*Mr. Kale.*—What is meant by skilled labour? In the answer to question No. 48 skilled labour is distinguished from carpenters, fitters, etc. Do you mean to say that carpenters are not skilled labour?

*Mr. Nabi-Ullah.*—Manager, foremen, heater-men and machine-men are included in skilled labour and the others come under unskilled.

*President.*—About this very large increase in pay, has there been the same increase in all industries in Lucknow?

*Mr. Nabi-Ullah.*—Must be in almost all: but I am not in a position to say to the Board exactly what increase there has been.

*President.*—Large though the rise in wages has been, I doubt if it has gone as high as 147 per cent. in most places. Certainly at Jamshedpur there has been no increase of wages on that scale.

*Mr. Nabi-Ullah.*—Once upon a time we used to pay Rs. 8 to the coolies and we now pay Rs. 25. You cannot get now syces under Rs. 15.

*President.*—In your opinion the increases given in your factory are approximately on the same scale as in the case of other industries in Lucknow.

*Mr. Nabi-Ullah.*—I think so. It is not because of an increase in efficiency that we have to pay more but because the men want more. You cannot get a punka puller on Rs. 4 a month now. In 1914, the total amount spent on labour was Rs. 58,000. In 1923, the total stands at 1,20,000 but in 1923 we have been running one machinery for about ten months and we dismissed about 150 men. If we had not dismissed the 150 men and got the total outturn the figures would come to something like, 1,50,000, if you take Rs. 20 as the average wage for a man. We have taken 100 as the original wage and calculated an increase of 147, i.e., to the men whom we paid Rs. 100 we have got to pay Rs. 247.

*President.*—I see that the war allowance has come down since 1923. Your answer shows that the war allowance at that time came to Rs. 49-8-8 when a man's pay was Rs. 100: I gather that it has come down to Rs. 25.

*Mr. Nabi-Ullah.*—On 15th September 1919 we gave 15 per cent. on the regular pay. In 1920 they demanded a further increase of 10 per cent. on the then regular pay which comes to Rs. 11-8-0 on Rs. 100.

*President.*—Take the man who had been drawing Rs. 100 in 1914. You show here that he is drawing Rs. 247 now. Before 15th January 1923 he had been drawing even more than that. Apparently he had been drawing Rs. 298 before that date, as you say that half the war allowance has been cut off from that date. Is Rs. 247 the pay before you cut off half the war allowance or after?

*Mr. Nabi-Ullah.*—Before?

*President.*—Then that man would be getting less now: That is the point Mr. Ginwala has put. He would be getting now Rs. 225.

*Mr. Ginwala.*—That surely is a very big increase—from 100 to 225.

*President.*—I think the index number of wholesale price is 170. The 1914 prices being taken as 100. In the next section about power, in answer to question No. 56, I see that the average quantity of coal used is a little over 5 lbs. to a pound of paper, out of which you reckon half for producing pulp and half for making paper. At present you are producing 1,800 tons of paper and so you are using 9,000 tons of coal.

*Mr. Nabi-Ullah.*—That is only for to-day.

*President.*—If you made 3,000 tons of paper you would require 15,000 tons of coal.

*Mr. Nabi-Ullah.*—Running half the mill we use a little more coal.

*President.*—You have told us that the average quantity of coal is a little over 5 lbs. to a lb. of paper? What would you substitute for that now? Is that figure of 5 lbs. arrived at on the basis of the present production or your full production?

*Mr. Nabi-Ullah.*—It is based on the total capacity.

*President.*—So that it may be little higher now.

In answer to question 57 you say that the freight for fuel is from Rs. 8-4-0 to Rs. 10 a ton. Rs. 10 is for Central Provinces coal and Rs. 8-4-0 for Bengal coal, I think.

*Mr. Nabi-Ullah.*—Yes.

*Mr. Ginwala.*—You use also second class coal.

*Mr. Nabi-Ullah.*—Good second class.

*President.*—The freight always comes heavy on second class coal, does it not?

*Mr. Nabi-Ullah.*—The freight is less on the other but comparing the total cost this is cheaper.

*President.*—In answer to question 62 "Is it likely that the Indian demand will substantially increase in the near future? If so, what are the reasons for the belief?" you say "It is very likely that the Indian demand for paper will substantially increase in the near future, if the cost of living goes down to that of pre-war days, and education grows more popular as it is hoped." This is a very hypothetical answer. Personally, I have no hope at all of the cost of living going down to the pre-war figure. I only wish it would.

In answer to question 63 you say that your principal markets are the United Provinces, the Punjab, the North-West Frontier Province, the Central Provinces, Rajputana and Central India.

*Mr. Nabi-Ullah.*—Yes.

*President.*—That is what one would expect. Could you say you sell more paper in one of these areas than in the other?

*Mr. Nabi-Ullah.*—We sell mostly in the United Provinces.

*President.*—And of the others?



*Mr. Nabi-Ullah.*—In the same order in which they are given in the answer, the Punjab, North-West Frontier, Central Provinces, Rajputana, and Central India.

*President.*—In answer to question 64 "Are there any markets in India in which, owing to their distance from the ports, you are more easily able to compete against the foreign manufacturer?" you say "No" but surely that is impossible. You must find it easier to compete in the United Provinces than in the Central Provinces because the latter are nearer to the ports. The point is not very important, but it is hardly a correct answer.

*Mr. Nabi-Ullah.*—It is so but in Lucknow we are very favourably situated.

*President.*—In answer to question 74 "Is the competition keener in some kinds or qualities of paper than in others? If so, please specify these kinds and qualities?" you say "Yes, in all grades." Surely, that cannot be so: there must be some kinds of paper in which there is less competition, e.g., Badami paper.

*Mr. Nabi-Ullah.*—There is more competition in white printing paper than in others.

*President.*—And a good deal less in the Badami and commoner papers?

*Mr. Nabi-Ullah.*—Yes.

*Mr. Ginwala.*—In answer to question No. 76 "Please state in respect of those kinds of paper which form the bulk of your output (1) the prices at which imported paper has entered the country and been sold during (a) 1912, 1913 and 1914 (b) 1917 and 1918 (c) 1921-22, 1922-23 and 1923-24," you say "Cannot say." Why?

*Mr. Nabi-Ullah.*—We have not got the accounts.

*Mr. Ginwala.*—Don't you keep yourself in touch with the market?

*Mr. Nabi-Ullah.*—I am afraid not.

*President.*—Is it not very important that manufacturers should keep in touch with their markets?

*Mr. Ginwala.*—In the evidence given before the Fiscal Commission by other firms, they laid a great deal of stress upon the fact that paper was being sold at very unremunerative prices, and that was one of the reasons why they wanted protection. You yourself say that you want protection because of this, and yet you have not given any evidence of what the foreign prices are.

*Mr. Nabi-Ullah.*—We will give you some idea. The Controller of Stationery and Printing gave us the English and foreign prices as against our prices in tenders against which we had to compete.

(Witness gave the figures from a statement.)

*Mr. Ginwala.*—Apart from this statement, have you got any other source of information? You have got customers: do not they come and tell you that you are quoting so much a lb. while foreign manufacturers charge so much?

*Mr. Nabi-Ullah.*—We have only had Government as our chief direct customers. Then we have the agents. They only say that the price is too high—they never quote others' prices—and ask us to try and reduce the price, but they won't place orders with us at our rates.

*President.*—In answer to question 80 "In which of the Indian markets is foreign competition keenest," you say "All over India." There again, I am afraid, that is hardly a right answer. It must be near the ports.

*Mr. Nabi-Ullah.*—These answers are worth nothing. Evidently office thought every question must be answered.

*President.*—I quite understand that you may be unable to supply the freights for the imported stuff. But you can at least tell us the freight you have to pay for your own paper to some of your most important markets, e.g., Lahore, Peshawar, etc. If you could give us that it would be useful.

We shall probably be able to get the freight rates on import paper from other sources and we can then make the comparison.

*Mr. Nabi-Ullah.*—We shall give you to-morrow the freights to the most important towns.\*

*President.*—In answer to question 85 (c) you consider that the Indian manufacturer is at a disadvantage in the case of efficiency of ordinary labour due to poor wages. There again is a suggestion that improved wages lead to improved efficiency. I think we have already asked some questions about that, and I suggest that it is a doctrine which requires considerable qualification. The ordinary statement one hears is this. In Europe or in America wages are comparatively high and the efficiency of the workmen is high also. In India wages are very low but the efficiency is very low, so that the one thing counterbalances the other. What we rather wanted to know was whether your experience in Lucknow suggests to you any comparison on that sort of basis. However, I do not press that point further as you have no practical acquaintance with the conditions outside India.

*Mr. Nabi-Ullah.*—Yes.

*President.*—In answer to question (f) with reference to the same question you say "Yes, the railway freight in particular should, in our opinion, be reduced." If that is so, it is all the more necessary that you should tell us what the railway freights are. When you are giving these railway freights if you happen to know what the rate per maund per mile is that the Railway charge, it would be useful. If you know it you might put it down; if not, do not worry about it.\*

*Mr. Kale.*—You might give it both for your raw materials and your finished product if you have got any special rates.

*Mr. Nabi-Ullah.*—We shall let you have it.

*Mr. Ginwala.*—In question 85 we asked that where possible definite figures should be given. What we wanted really was to try and ascertain in terms of money, where possible, how much worse off you were as compared with your foreign competitors. For instance, take plant and machinery. In Great Britain, supposing it costs £100,000 for a certain machinery, we wanted you to point out that here it would cost, say, £120,000 or £110,000 including freight and various other things. That is the sort of thing we wanted you to give us under each heading.

*Mr. Nabi-Ullah.*—We can probably give you that.

*Mr. Ginwala.*—The same thing about foreign labour. You say, you have got only 3 European workmen and your disadvantage is small in that matter. Then, take (h) for instance—"Customs duty on imported materials." You might have given us figures to show how much it cost you.

*Mr. Nabi-Ullah.*—We shall give you the information you want.†

*President.*—In answer to question 87—"Do you consider that your mill is sufficiently large as an economic unit of production to ensure economy? What in your opinion is the smallest unit of production which can be operated economically under present-day conditions?"—your answer is "About 15 tons of paper daily is the smallest unit of paper which can be operated economically under the present day condition of our mills." We were not thinking of your mill at all. A great point is made about the economies resulting from mass production. That means that it may be more and more difficult to operate at a profit a factory with a small output. It might be possible now to work a factory with an output of only 15,000 tons a year, but twenty years' hence, it might be necessary to secure an output of 25,000 tons a year in order to have a chance of survival.

*Mr. Nabi-Ullah.*—I am afraid the question had not been properly understood.

*President.*—Think it over as I have explained it. If you have any definite opinion let us have it. If you find that you haven't got any definite opinion, you need not worry about it.

\* *Vide* Statement II (b).

† *Vide* Statement II (c).

*Mr. Nabi-Ullah.*—We will take a note of it.

*President.*—In answer to question 91—"Do you consider your machinery and other equipment sufficiently up-to-date and efficient to enable you to compete successfully against the foreign manufacturer," you say "Yes, with a little alteration and addition to machinery provided there is no vindictive competition." It is always a question of opinion whether competition is vindictive or not. What I am anxious to know is something different. Going on to the next question—"Is it a fact that during and since the war many improvements have been effected in pulp and paper-making processes and machinery" and the next question "Have you since 1914 adopted any new process of manufacture or have you installed new plant and machinery.....", you say "No, excepting only necessary additions and alterations." That at once raises the question whether you are up-to-date in your equipment.

*Mr. Nabi-Ullah.*—We are not.

*President.*—Then it would hardly be the right answer again. Can you tell us what was the latest date on which you made substantial addition to or replacement of your plant? Has not there been any since 1882?

*Mr. Nabi-Ullah.*—There are two machines. One came in 1882 and the other much later, about 1894.

*President.*—In considering whether protection is justified, we have got to make sure that your machinery and equipment is up-to-date. No amount of protection that Government can give is of much use to a concern with obsolete and worn out machinery, because it will be frozen out in any case in another ten years time. What I mean is that, if your machinery is really out of date, it is not a satisfactory basis for any claim you might put forward. In the statement in answer to question 95 in the first column you have shown the value of the property as written down and the second column is the total amount that has been written off?

*Mr. Nabi-Ullah.*—Yes.

*Mr. Ginwala.*—The total of the two would be the equivalent of the block value?

*Mr. Nabi-Ullah.*—Yes. Prime cost.

*President.*—The fact that your answer to question 100 is blank suggests that you have not been purchasing much machinery?

*Mr. Nabi-Ullah.*—No.

*President.*—You have given us in answer to question 107 a list of your various reserve funds aggregating Rs. 21,23,000. Part of this no doubt is used as working capital, i.e., a part of it is locked up in stocks of paper, spare parts of machinery and so on, and sometimes in unpaid debts of your customers. But what have you done with the balance? What you would require for working capital would not absorb the whole of the amount. Is the balance invested? I raise this point because it may explain what is an obvious anomaly. You have asked for 30 or 40 per cent. protection, but your own statement is that your Company, since 1916, has never paid less than 6 per cent. dividend and 24 per cent. bonus. If that dividend and bonus were earned out of the paper you were making the case for protection would be very poor indeed, because you already earn ample profits. Perhaps you can tell us what the position is.

*Mr. Nabi-Ullah.*—We have paid out of accumulated funds.

*Mr. Ginwala.*—Is it paid directly out of this fund or out of the interest on investments?

*Mr. Nabi-Ullah.*—Out of the interest and sometimes directly from the reserve. We have got a dividend and bonus equalisation fund.

*President.*—It won't last very long.

*Mr. Nabi-Ullah.*—When that fund is exhausted we replenish it by transferring to it from our reserves.

*President.*—How long do you propose to carry on the process? Every time that you take out of the capital—if it is from interest on capital that is

another matter—you are diminishing your chances of doing anything, in the paper business. If there is an improvement in trade conditions, or protection is given, you might be unable to take advantage of a good opportunity to re-equip yourselves. I quite recognize that that Dividend and Bonus equalization fund is an excellent thing. But I do not think it is much use trying to keep up a 80 per cent. dividend, when you are manufacturing at a loss.

*Mr. Nabi-Ullah.*—Quite so.

*President.*—The shareholders have been so liberally treated during the last few years that they can well afford to wait for dividends for a little time now.

*Mr. Ginwala.*—Would it not be to your advantage to go into liquidation and give them Rs. 250 for each share? If you are running your business at a loss will not all this be wiped out in course of time?

*Mr. Nabi-Ullah.*—That was the first loss.

*Mr. Ginwala.*—You yourself say that it would cost Rs. 40 lakhs to reconstruct the mills and you have got only 20 lakhs. All this machinery must come to a standstill some day, you have been using these for some 80 or 40 years.

*Mr. Nabi-Ullah.*—Yes.

*Mr. Ginwala.*—What is your position now?

*Mr. Nabi-Ullah.*—I leave it to the Board.

*Mr. Ginwala.*—Is the Board to treat it as a live industry or as a sort of moribund industry? What is the position? The Board would like to know that.

*President.*—It is no use attempting to protect an industry if that is the basis on which you work it.

*Mr. Kale.*—I want to know what led you to pay this bonus in addition to the ordinary dividend. You should have refrained from paying it and laid by this amount.

*Mr. Nabi-Ullah.*—This is done at the general meeting. The Directors recommend a bonus of, say, 3 per cent. The shareholders say 'No, you are making lots of profit why not give us more.'

*Mr. Kale.*—Are we to understand that the shareholders want that this industry should now be stopped and they need not trouble about it later on? Otherwise they would not kill the goose to get the golden eggs.

*Mr. Nabi-Ullah.*—They think it is a *kamadhenu*, that there is an unlimited supply.

*Mr. Kale.*—They think they should get as much out of it as possible, that is their idea. The shareholders should not now come to Government and ask for protection. They deserve the result. Does it not follow? Anyone who reads this will carry this impression.

*Mr. Ginwala.*—Is the Board to treat this as an industry which intends to exist or an industry which would like to die a comfortable death?

*Mr. Nabi-Ullah.*—We should like to be treated as a live industry. Means of course we have not. But it is like this: quotations were so high that we thought that we might wait for machinery.

*Mr. Ginwala.*—For new machinery?

*Mr. Nabi-Ullah.*—Yes. We have got quotations.

*Mr. Ginwala.*—When did you get quotations?

*Mr. Nabi-Ullah.*—Two years ago.

*Mr. Ginwala.*—Have not the prices come down?

*Mr. Nabi-Ullah.*—Since two years we find the market getting low.

*Mr. Ginwala.*—You realize the difficulty of the Board. Supposing there were no other manufacturers in question just now, what can the Board say? They will say the industry is dying, or that it will die in a very short time;

it has got no money, it does not contemplate raising any money and the shareholders might like to get Rs. 250 for each share. It may be to their immediate advantage, therefore they may not recommend anything.

*Mr. Nabi-Ullah.*—I don't follow. Suppose we can get the machinery at Rs. 20 lakhs for instance and we borrow.

*President.*—I do not know whether this "Renewal to Machinery Fund" is meant for important replacements. If it is, it gives you a certain amount. That would still leave you a balance which could be used as working capital. In that case, supposing conditions look favourable, you hope to borrow the balance required to purchase new plant?

*Mr. Nabi-Ullah.*—Borrow or raise the capital. Last time we borrowed. We had only one machine and we thought we would expand.

*Mr. Ginwala.*—Is this Rs. 40 lakhs for two machines?

*Mr. Nabi-Ullah.*—One machine and repairs and renewals of the other.

*Mr. Ginwala.*—You will have two machines going?

*Mr. Nabi-Ullah.*—We will have two machines going and we will have another machine. It will be used for making boards. The second will have to be renewed at a cost of Rs. 8 lakhs, and then the estimate of 35 lakhs for the new machine.

*Mr. Ginwala.*—What capacity?

*Mr. Nabi-Ullah.*—10 tons a day for new machine. Renewal to No. 2 machine will increase its output to the extent of 4 tons a day. It is an extension, not renewal. The 3rd machine in contemplation will produce 10 tons a day and will cost Rs. 35 lakhs.

*President.*—If you replace your machinery and simultaneously increase your capacity, you have done more than mere replacement. You increase the capacity of your plant and therefore you have got a better asset than you have had before. But I think you ought to make sure of an adequate supply of raw materials before you make a start.

*Mr. Nabi-Ullah.*—I don't think there will be any difficulty.

*President.*—But this is a point that undoubtedly requires looking into.

*Mr. Nabi-Ullah.*—Certainly.

*President.*—In answer to question 108—"What additional capital (if any) would it be necessary to raise in order to carry out any scheme of replacement or extension of plant which the Company contemplate"—you say "Rs. 2,50,000 provided trade conditions take a hopeful and favourable turn."

*Mr. Nabi-Ullah.*—It is wrong. It ought to be Rs. 40,00,000.

*President.*—About question 118 as regards working capital, there is some little misunderstanding. The question was "What is the working capital which the Company requires (i) according to its present output and (ii) according to the output equivalent to its full capacity," and you say "About 20 lakhs is the invested amount in business at the present day with the depreciated value of our machinery, and buildings, etc." I take it in the ordinary sense working capital is distinguished from fixed capital, as represented by buildings, plant, etc. The working capital usually represents stocks of finished goods, outstandings, goods sold but not paid for, spare parts of machinery, etc.

*Mr. Nabi-Ullah.*—It is all wrong. We have got stores valued at about Rs. 4,62,000.

*President.*—Take the case of your stocks.

*Mr. Nabi-Ullah.*—It is about Rs. 7 lakhs.

*President.*—The point is that the stocks here are unusually high. Assuming that protection were given, you would not have to hold these stocks. You would be able to sell your goods as you produce them. Therefore you would not require so much working capital.

*Mr. Nabi-Ullah.*—We would require a smaller amount.

*President.*—If you could find out the average of the stocks held and take it at present-day costs, that would give you an idea.

*Mr. Gobardhan Pershad.*—It would be better to take the average of the stocks held during the war time because then we were readily selling.

*Mr. Kale.*—But the prices were higher.

*Mr. Gobardhan Pershad.*—We will value it at present-day costs.

*Mr. Ginwala.*—Are you taking the cost price or the market price?

*Mr. Nabi-Ullah.*—Cost price when it is lower than the market price and market price when it is lower than the cost price. For the last two years the market price is below the cost price. Previous to that we always took the cost price as it was lower than the market price.

*President.*—As regards your answer to question 140, the question was "The paper industry has been in existence in India for a number of years. How is that the industry is still in need of protection?" and you say "Because the industry has grown self-supporting and owing to foreign competition." The real point is this. After 40 years, you ought to have overcome the initial difficulties. Since you managed to exist for that period, you should be firmly established by now.

*Mr. Nabi-Ullah.*—This answer is worth nothing.

*President.*—On thinking it over, if you feel that you can give us an opinion, please let us have it.

*Mr. Nabi-Ullah.*—Very well.

*Mr. Ginwala.*—It is necessary for you to answer that question.

*Mr. Nabi-Ullah.*—Quite right. The industry had been in existence for a fairly long period. Hitherto we were paying good dividends. We only want now temporary protection.

*Mr. Kale.*—Is it your opinion that the industry taken generally has established itself.

*Mr. Nabi-Ullah.*—Yes.

*Mr. Kale.*—But owing to temporary causes it is working at a loss and, if the Government or the Legislature tides the industry over that period, it won't require any protection.

*Mr. Nabi-Ullah.*—That is right.

*Mr. Kale.*—Otherwise, the industry is self-supporting and established on firm footing.

*Mr. Nabi-Ullah.*—Yes.

*Mr. Ginwala.*—You are favourably situated because you are so far away from the ports. Therefore in your case it has been possible to give dividends every year since you started except for two half-years. I think that they must have been unusually bad half-years.

*Mr. Nabi-Ullah.*—Take 1896, for instance. It may be like this. We had then added a new machine. We might have decided that instead of paying dividends that year, we had to pay the profits towards the reduction of our debt and pay better dividends later.

*Mr. Ginwala.*—Your case is peculiar. You may be able to explain by saying that because of your geographical position you are more prosperous than others.

**Oral evidence of Mr. SAYYID NABI-ULLAH and Mr. GOBARDHAN  
PERSHAD representing the Upper India Couper Paper Mills,  
recorded at Simla on Tuesday, the 24th June 1924.**

*Mr. Ginwala.*—With regard to the primary raw materials, what is your percentage of yield from each one of these things? How much pulp do you get from one ton of rags?

*Mr. Nabi-Ullah.*—About 50 per cent.

*Mr. Ginwala.*—Is not that a smaller percentage than usual for rags?

*Mr. Nabi-Ullah.*—It all depends on the kind of rags we got.

*Mr. Ginwala.*—I am asking you, how much pulp you get from a ton of the kind of rags you use?

*Mr. Nabi-Ullah.*—If we say 45 to 50 per cent., I think that it would be all right?

*Mr. Ginwala.*—In that case, rags are much more expensive than any other material that you are using?

*Mr. Nabi-Ullah.*—No, they are not.

*Mr. Ginwala.*—How much yield do you get from one ton of hemp and jute?

*Mr. Nabi-Ullah.*—About the same.

*Mr. Ginwala.*—And from grass?

*Mr. Nabi-Ullah.*—In the case of grass, it is less. We get about 35 to 40 per cent.

*Mr. Ginwala.*—Waste paper you simply mix: you don't use waste paper by itself?

*Mr. Nabi-Ullah.*—We get an yield of 75 per cent. from waste paper. But then the quantity of waste paper we use is very small.

*Mr. Ginwala.*—It seems to me that your yield is very much smaller than it should be, how is it?

*Mr. Nabi-Ullah.*—There is a lot of foreign matter, dirt, etc. We have to pick these things out. We lose some of it in washing.

*Mr. Ginwala.*—Take the case of rags: others also have to do the same thing.

*Mr. Nabi-Ullah.*—Most of the rags we get are very, very inferior. You will find that the down country mills are not using so much rags.

*Mr. Ginwala.*—We have not received their statement yet, and so we cannot say. But I cannot understand why your yield is so small in all these materials, except waste paper.

*Mr. Nabi-Ullah.*—As I submitted yesterday, there is no market for rags where we can go and buy. The people whom our contractors engage for collecting rags (Chamars, etc.) take these to the contractors who send them to us. They don't clean, they don't sort out or do anything; they simply send them on to us anyhow. Then we have got to sort them out, clean them, and dust them. There is a lot of wastage.

*Mr. Ginwala.*—As regards your grass, is it a little inferior to what it used to be?

*Mr. Nabi-Ullah.*—It is certainly a little inferior. It is at times a very uncertain item so far as the quality is concerned. The contractors send us sometimes inferior stuff. The ordinary jungle grass is mixed up sometimes with the Sabai grass. The grass is so inferior that it is rather surprising that at times we get even 35 to 40 per cent.

*Mr. Ginwala.*—It is a tremendously big amount to pay Rs. 72-2-0 a ton.

*Mr. Nabi-Ullah.*—Yes, it is. It used to be Rs. 27 or Rs. 26.

*Mr. Ginwala.*—Delivered at the mills?

*Mr. Nabi-Ullah.*—Yes.

*Mr. Ginwala.*—You cannot give us any figures as to what the grass costs on the fields.

*Mr. Nabi-Ullah.*—There is royalty to pay, there is labour to cut the grass, there is the transportation charge to bring it to the factory and so on. We have no idea.

*Mr. Ginwala.*—Do you find that it is more and more difficult to get rags, hemp and jute?

*Mr. Nabi-Ullah.*—Yes.

*Mr. Ginwala.*—Is not that a serious disadvantage for you considering that you use two-thirds of these materials?

*Mr. Nabi-Ullah.*—It is.

*Mr. Ginwala.*—Is there any prospect of your being able to use more Sabai grass than before? The prospects are the other way about, are they not?

*Mr. Nabi-Ullah.*—I think so.

*Mr. Ginwala.*—All the raw materials are in a very precarious condition?

*Mr. Nabi-Ullah.*—Probably, they are to a certain extent.

*President.*—It is rather important. It has a direct bearing on the whole case.

*Mr. Ginwala.*—Your case for protection is very much weakened, if not entirely destroyed, by the fact that your raw materials are gradually disappearing. Is not that so?

*Mr. Nabi-Ullah.*—I do not feel so.

*President.*—What has happened since the war is that the cost of your raw materials has gone up and has remained up, whereas the cost of paper went up but has now gone down again. It is rather an important matter.

*Mr. Nabi-Ullah.*—Yes. But the prices of raw materials have also come down to a certain extent.

*Mr. Ginwala.*—The price of raw materials has not necessarily gone up because the demand has become greater. It has gone up because the supply has become much smaller. That is what it comes to.

*Mr. Nabi-Ullah.*—The down country mills are coming up to Nepalganj for their grass. This accounts for the rise of price in Sabai.

*President.*—Take the country as a whole. Is there any more paper being produced than there was in 1914?

*Mr. Nabi-Ullah.*—Probably not.

*President.*—The only new factory is the mill started by Messrs. Andrew Yule & Co., but they are using a different raw material which does not interfere with your supply.

*Mr. Nabi-Ullah.*—But the Titaghur Mills and Bengal Paper Mills have come up to Nepalganj.

*Mr. Ginwala.*—That may be. In that case, the total demand has not increased, but somebody else wants the grass and is prepared to pay more than you.

*Mr. Nabi-Ullah.*—Yes.



*Mr. Ginwala.*—Looking at the raw materials as a whole, it looks as though the supplies are getting smaller and smaller in proportion to the demand.

*Mr. Nabi-Ullah.*—I think that we can get supplies at a little higher price.

*Mr. Ginwala.*—It is the same thing?

*Mr. Nabi-Ullah.*—As I submitted yesterday, we have got now—at least our contractors have got now—to go more uphill than before.

*Mr. Ginwala.*—That is precisely the point. If you go farther and farther still, you have to pay more and more and your cost will go up, and it will be unremunerative to manufacture paper from this material any longer in this country. That is the danger.

*Mr. Nabi-Ullah.*—Yes, probably.

*Mr. Ginwala.*—You have not looked for any solution of the difficulty.

*Mr. Nabi-Ullah.*—No.

*Mr. Ginwala.*—You have not looked for any other substitute which is cheaper and more easily accessible.

*Mr. Nabi-Ullah.*—No.

*Mr. Ginwala.*—With regard to auxiliary raw materials, all these are imported from Great Britain.

*Mr. Nabi-Ullah.*—Most of them, barring, for instance, rosin.

*Mr. Ginwala.*—I mean, whatever is imported is imported from Great Britain.

*Mr. Nabi-Ullah.*—Yes.

*Mr. Ginwala.*—Is it because the quality of British goods is superior to Continental goods, or is it because they are not obtainable elsewhere?

*Mr. Nabi-Ullah.*—We can get them from other sources, but as we have been dealing with British firms for a long time, we prefer to order from them.

*Mr. Ginwala.*—What has been the increase in the prices of these various materials since the war?

*Mr. Nabi-Ullah.*—We will send you the figures for 1914 and 1924 later.\*

*Mr. Ginwala.*—How is it that you have not attempted to make your own chemicals at all?

*Mr. Nabi-Ullah.*—We don't think that it would pay.

*Mr. Ginwala.*—According to your answer to Question 109, it is a fairly large percentage of your costs, is it not?

*Mr. Nabi-Ullah.*—Yes.

*Mr. Ginwala.*—Don't you think that there would be some economy if you manufactured some of the chemicals yourselves?

*Mr. Nabi-Ullah.*—We have not tried but evidently we are under the impression that it won't succeed; it won't pay.

*Mr. Ginwala.*—You use 400 tons of alum a year. It is a very large quantity. What do you use that for?

*Mr. Nabi-Ullah.*—For sizing the paper?

*Mr. Ginwala.*—What do you use china clay for?

*Mr. Nabi-Ullah.*—We use china clay for loading.

*Mr. Ginwala.*—What do you use rosin for?

*Mr. Nabi-Ullah.*—Rosin and alum are both used for sizing.

*President.*—For what quantity of paper are these quantities that you have given in answer to Question 36 required?

*Mr. Nabi-Ullah.*—For 3,000 tons of paper.

*Mr. Ginwala.*—With 225 tons of china clay, 400 tons of alum and 75 tons of rosin, it just comes to 700 tons, which is nearly 25 per cent. of your production and which is not paper at all.

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\* *Vide* Statement II (a).

*Mr. Nabi-Ullah.*—That is right.

*Mr. Ginwala.*—Is it not rather a large percentage?

*Mr. Nabi-Ullah.*—We are actually using what we have put down.

*Mr. Ginwala.*—Is not that a very large percentage for sizing and loading? Is it not one of the reasons why you may not be able to get good prices for your paper?

*Mr. Nabi-Ullah.*—But the quality in the bazar is all right.

*Mr. Ginwala.*—Bazar quality may be anything, but you are dependent, are you not, considerably on public bodies and Government?

*Mr. Nabi-Ullah.*—Government never object to it.

*Mr. Ginwala.*—Are you sure?

*Mr. Nabi-Ullah.*—Quite sure.

*Mr. Ginwala.*—I wanted to know whether this 25 per cent. is not a large percentage.

*Mr. Nabi-Ullah.*—Evidently not. They did not object to our sizing. They never objected to our loading. They did not say that we were putting too much foreign matter. They did not say anything at all.

*Mr. Ginwala.*—You do not manufacture much coloured paper?

*Mr. Nabi-Ullah.*—Not much.

*Mr. Ginwala.*—How much dyes do you use in a year?

*Mr. Nabi-Ullah.*—Worth Rs. 8,000 to Rs. 9,000 a year.

*Mr. Ginwala.*—That is a very small quantity?

*Mr. Nabi-Ullah.*—Yes.

*Mr. Ginwala.*—With regard to your mill labour, have you had any labour troubles?

*Mr. Nabi-Ullah.*—On a small scale several times, but not of a serious nature.

*Mr. Ginwala.*—Is there any labour association in Lucknow?

*Mr. Nabi-Ullah.*—No. In the railway perhaps there is, but not outside.

*Mr. Ginwala.*—The answer to Question 76 (ii) does not give us at all any idea of what you have really got. These are merely rates which are given. By realised prices we did not mean merely the rates. What is really required is this. Suppose you manufacture 100,000 lbs. of paper. What did you get for the 100,000 lbs. of paper and how much you get per lb. on the average? You may have manufactured 1,000 lbs. of very good paper for which you got a good price and 1,000 lbs. of very inferior paper for which you got a low price. We want the average price.

*Mr. Nabi-Ullah.*—You want the average price? For which years do you want?

*Mr. Ginwala.*—For the years referred to in Question 76 (i).

*President.*—I think possibly we were at fault in drafting the question and it might mislead people when answering. We wanted to know the general level of your prices, not for every minute sub-division of the different kinds of paper, but if you could possibly give the figures for Badami paper and for white printing paper, it pretty nearly covers it.

*Mr. Ginwala.*—Take the production of those years and if you can tell us what you realised for the whole year, we can get the average.

*Mr. Nabi-Ullah.*—We have got the average calculated for each half-year: there are two costs—one is for paper manufactured during the half-year: another is the average cost taking stock in hand along with the paper manufactured for the half-year. Which of the two costs do you want?

*Mr. Ginwala.*—We do not want the average cost including the stocks: we want the average of the paper actually manufactured.

Mr. Nabi-Ullah.—

Year.	Outturn.	Cost.	Realized price.
	lbs.	Rs. A. P.	Rs. A. P.
1912—			
1st half	34,98,600	0 2 67	0 2 3-15
2nd half	32,30,585	0 2 2-47	0 2 2-92
1913—			
1st half	29,77,212	0 2 1-32	0 2 3-87
2nd half	30,23,260	0 2 1-35	0 2 3-4
1914—			
1st half	31,39,466	0 2 1-75	0 2 4-48
2nd half	30,56,169	0 2 1-38	0 2 5-24
1917—			
1st half	32,28,761	0 2 8-35	0 4 5-24
2nd half	38,56,050	0 2 10-25	0 4 10-43
1918—			
1st half	29,45,094	0 3 5-07	0 5 8-49
2nd half	35,33,594	0 3 5-26	0 6 4-66
1921—			
1st half	25,15,929	0 5 3-62	0 6 6-3
2nd half	32,97,080	0 4 9-12	0 6 2-57
1922—			
1st half	22,64,306	0 4 11-23	0 5 6-93
2nd half	28,29,789	0 4 2-29	0 4 11-24
1923—			
1st half	16,66,445	0 5 1-58	0 4 4-99
2nd half	21,29,509	0 4 7-88	0 4 8-12

Mr. Ginwala.—The answers to Questions Nos. 77, 78 and 79, I am sure, are not exactly what we wanted. However, they do give some information which may be useful to us. Since last year has there been a change in the policy of Government with regard to purchase of paper?

Mr. Nabi-Ullah.—Yes.

Mr. Ginwala.—How do you describe the change? In what direction has the change taken place?

Mr. Nabi-Ullah.—Tenders are now called for from England too.

Mr. Ginwala.—That is with regard to procedure. How has it affected the manufacturer? Was any change introduced by Government in its policy?

Mr. Nabi-Ullah.—Tenders were called for from England.

Mr. Ginwala.—Did not they call for tenders before?

Mr. Nabi-Ullah.—Formerly, only quotations for papers were asked for, without calling for definite tenders in England, and on the basis of these prices the Indian manufacturers were asked to reduce their prices, if possible. Now tenders are simultaneously called for in England and in India and Home quotations are compared side by side with the Indian quotations after making usual adjustments to cover the transit, custom and landing charges and allowing an extra 5 per cent. preference to the Indian mills partly to cover their services for distributing the supplies direct to sub-offices at different stations

in India and partly in lieu of the advantage of being able to reject any kind of bad supplies made by the mills. It has also been decided that the tender as submitted was final and no chance for revision was given to the Indian mills as was done before.

*Mr. Ginwala.*—Does it make any difference to the manufacturers in India?

*Mr. Nabi-Ullah.*—Yes, we consider 5 per cent. preference is not enough and we are at a disadvantage.

*Mr. Ginwala.*—With regard to your equipment I would like to ask one or two questions. Have you got your estimate here of the new machines?

*Mr. Nabi-Ullah.*—No. We have not got that with us.

*Mr. Ginwala.*—Could you send that to us because it is rather important from this point of view: in considering any recommendations that we may make we have to consider as far as possible what it would cost a new firm entering the trade to put up a plant.

*President.*—One point that always arises in connection with protection is that it encourages new people to come into the trade. Therefore any evidence that we may get as to the cost of machinery will be useful.

*Mr. Nabi-Ullah.*—We shall wire to-day and get it soon.\*

*Mr. Ginwala.*—Is that the latest estimate that you have got?

*Mr. Nabi-Ullah.*—Two years old.

*Mr. Ginwala.*—Since then you have not made any enquiries?

*Mr. Nabi-Ullah.*—No. Prices have not changed very much: since then, an up-to-date paper-making plant has been put up in Bengal.

*Mr. Ginwala.*—But I hope you are getting a new one this time?

*Mr. Nabi-Ullah.*—Yes, a new mill.

*Mr. Ginwala.*—Is it English or American?

*Mr. Nabi-Ullah.*—English. The manufacturers are the same. It was very satisfactory on the last occasion.

*Mr. Ginwala.*—Does it include a chemical plant?

*Mr. Nabi-Ullah.*—No.

*Mr. Ginwala.*—What does it include?

*Mr. Nabi-Ullah.*—It includes a pulp-making plant and the paper-making plant: also a power plant.

*Mr. Ginwala.*—Is it steam or electricity?

*Mr. Nabi-Ullah.*—It is a combination of steam and electricity.

*Mr. Ginwala.*—Perhaps in your estimates you have got a brief account which gives the classification of the machinery.

*Mr. Nabi-Ullah.*—We have got a detailed account.

*President.*—After all we cannot grapple with elaborate technical details. It is more or less on general lines that we would like to have it, just to give us an idea.

*Mr. Ginwala.*—It would produce 10 tons a day of finished paper without the chemical plant?

*Mr. Nabi-Ullah.*—Yes.

*Mr. Ginwala.*—Would it reduce your cost of production? Have the makers told you how much the cost of production would be reduced compared to your present cost?

*Mr. Nabi-Ullah.*—Say, by about 10 per cent. This is our surmise.

*Mr. Ginwala.*—Not more than that? But it is going to cost you nearly four times as much, is it not?

*Mr. Nabi-Ullah.*—It may be that the prices have come down a little since then.

*Mr. Ginwala.*—You say that it is five times the value of the plant and buildings, as compared with what you have erected yourselves.

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\* Vide Statement II (c).

*Mr. Nabi-Ullah.*—It is not 5 times. We want to correct that statement. It is only 2½ times. We have to calculate it only against the block value which is about Rs. 19 lakhs.

*Mr. Ginwala.*—You see what you have done in calculating your depreciation. You have taken merely the depreciation on the book value from time to time of your plant, not on the replacement value of the plant.

*Mr. Nabi-Ullah.*—I do not quite follow.

*Mr. Ginwala.*—Take your machinery, for instance. It is worth, say, about Rs. 13 lakhs.

*Mr. Nabi-Ullah.*—It was worth that.

*Mr. Ginwala.*—You have taken your depreciation on the Rs. 13 lakhs. Now according to the figures you have given your machinery costs you 2½ times more. Therefore you have not taken enough to renew your machinery.

*Mr. Nabi-Ullah.*—Did we have any idea that it would cost us so much?

*President.*—It is not that Mr. Ginwala is criticising or suggesting that you are acting improperly. He is only bringing to your notice the fact that, when there is a great general rise in the level of prices, it may be necessary to revise all your depreciation rates. The basis of your depreciation allowance should be what it would cost you to replace your machinery when it is worn out; otherwise when your machinery is worn out there is no money there to replace it.

*Mr. Ginwala.*—You have paid 6 per cent. dividend and this bonus. The result is that your depreciation and reserve funds are about half of what they ought to have been now. For that reason when you want to renew your machinery you are in difficulties.

*Mr. Nabi-Ullah.*—Yes.

*Mr. Ginwala.*—How do you propose to remedy that? Your horse is nearly dead or it will die very soon. If you want to buy a new horse it is going to cost you nearly 40 lakhs. You are worth Rs. 20 lakhs.

*Mr. Nabi-Ullah.*—If it does cost Rs. 40 lakhs and if the prices do not go down it would be difficult; on the other hand, if prices do go down then one of the two alternatives is left to us, i.e., either borrow the remaining amount or have additional capital.

*President.*—If you have to borrow additional capital then you have to realize from the sale of your paper a larger revenue.

*Mr. Nabi-Ullah.*—Of course.

*President.*—The question is “Is it possible to do that?”

*Mr. Nabi-Ullah.*—It is probably not, but we started one machine and once upon a time the question arose whether we should not develop and have another machine. We decided to have another machine and again the question arose whether we should borrow money or extend the capital. We borrowed about Rs. 7 lakhs on a capital of only Rs. 8 lakhs and we have paid all.

*President.*—That has all been paid?

*Mr. Nabi-Ullah.*—Years ago.

*Mr. Ginwala.*—Now the position is this: You have been paying your shareholders since 1914, 6 per cent. *plus* a bonus. Now your shareholders have got used to that dividend and bonus. Your machinery is wearing out. Therefore you have got to renew it. That will take away all your reserves and everything—Rs. 21 lakhs. Therefore all the bonus must cease so far as that bonus is concerned and you may or may not earn any dividends at all. In addition to that you have got either to borrow Rs. 20 lakhs or have Rs. 20 lakhs worth more share capital. That would wipe off your working capital also; so that you will have to borrow Rs. 10 or Rs. 15 lakhs working capital. So your commitments now are Rs. 40 lakhs *plus* Rs. 10 lakhs against which you have got Rs. 20 lakhs. Are you prepared to raise this Rs. 30 lakhs? Will your shareholders agree to get no dividend at all, forego the bonus and at the same time borrow Rs. 30 lakhs?

*Mr. Nabi-Ullah.*—We can only give our opinion. Personally speaking I think the shareholders will never agree to this, because they are afraid that prices are going down and we are losing and there are no prospects of making money.

*Mr. Ginwala.*—You fully realise the implication of your answer?

*Mr. Nabi-Ullah.*—I do.

*Mr. Ginwala.*—This statement showing the distribution of dividend does not give any idea of the profits you made.

*Mr. Nabi-Ullah.*—No, it does not. Profit and loss account will give that.

*President.*—Have you got spare copies of your Annual Reports. Is there a set that you can leave with us to be returned eventually?

*Mr. Nabi-Ullah.*—We can send you spare copies from Lucknow.

*Mr. Ginwala.*—Will these accounts show whether you paid this bonus out of interest on investments?

*Mr. Nabi-Ullah.*—They will show that.

*Mr. Ginwala.*—What is wanted is what is the profit each year, how much you pay as dividend, how much you carry forward to reserves.

*Mr. Nabi-Ullah.*—We shall give you a statement from 1912 onwards.\*

*Mr. Ginwala.*—May I take it that some of the bonuses that you have shown in the accounts are from the profits as well as from the reserve fund?

*Mr. Nabi-Ullah.*—Only during the last two half-years these were partly taken from the reserve.

*Mr. Ginwala.*—And the previous years?

*Mr. Nabi-Ullah.*—From the profits.

*Mr. Ginwala.*—How do you calculate your profits? In calculating your profits you first write off your actual cost?

*Mr. Nabi-Ullah.*—Yes.

*Mr. Ginwala.*—Do you deduct all your depreciation?

*Mr. Nabi-Ullah.* No, it is not deducted. It is like this: we have earned, say, so much—

*Mr. Ginwala.*—What do you call earnings; that is what we want to know.

*Mr. Nabi-Ullah.*—Gross earnings. We allow so much for depreciation and then we say so much is at your disposal and we propose that we pay you so much for dividend and so much for bonus.

*Mr. Ginwala.*—Why do you separate the dividend and the bonus? What is the idea?

*Mr. Nabi-Ullah.*—Because we wanted to keep the dividend at one figure, viz., 6 per cent.

*President.*—So that the shareholders hoped to get 6 per cent. sure and something else as a windfall!

*Mr. Ginwala.*—You have certainly carried a good deal towards your reserve fund, but on the other hand you have allowed for your depreciation very little.

*Mr. Nabi-Ullah.*—I am afraid the proposition is not clear. When we paid Rs. 8 lakhs we thought we would allow 5 per cent. for depreciation: that would be all right. Instead of that we paid 7 per cent. We did not know then what the new machinery would cost us. We thought probably it would be the same or something very near it.

*Mr. Ginwala.*—When you got that estimate did you increase your depreciation?

*Mr. Nabi-Ullah.*—That was only two years ago. We had no money then to increase the depreciation.

*Mr. Ginwala.*—In your system of accounts do you write off depreciation on the depreciated value each year?

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\* Vide Statement II (f).

*Mr. Nabi-Ullah.*—Yes.

*Mr. Ginwala.*—Has it been going on since 1885?

*Mr. Nabi-Ullah.*—Yes. But since 1921 the income-tax people allowed depreciation to be calculated on the prime cost, and since then we have been calculating on the prime cost. They have got a depreciation account in their own office and according to that they allow a certain percentage, but that amount we have not got to provide from our profits.

*Mr. Ginwala.*—Have you changed your system now?

*Mr. Nabi-Ullah.*—There has been no change in our system.

*President.*—We understand that the income-tax people have changed their system and they allow you to set off depreciation up to a certain amount, but do they allow you to set it off if you don't actually put it aside?

*Mr. Nabi-Ullah.*—No.

*President.*—I gather that you yourselves do not at the end of each year increase the depreciation allowance to the percentage of the prime cost. You have not altered your practice in that respect. The point is this: if you follow your old practice how will you calculate the percentage for depreciation when next you close your accounts?

*Mr. Nabi-Ullah.*—We only charge according to the profits we make. We do not look very much to the percentage; supposing we have made Rs. 50,000 profit, and the Directors say 10,000 may be adjusted against the depreciation to buildings and machinery, it is accordingly done.

*Mr. Ginwala.*—Look to your Form No. 1. Can you give us quantities used by you in each year?

*Mr. Nabi-Ullah.*—We have not got it here.

*Mr. Ginwala.*—Take auxiliary raw materials, for instance. You lump them together. It does not give us any idea how much caustic soda, for instance, or rosin and things like that you have used. Can you give us the quantities and rates under the headings in this Form No. 1?

*Mr. Nabi-Ullah.*—Rates would be the average rates for the year what we take for purposes of the balance sheet, and we shall be able to furnish these.\*

*Mr. Ginwala.*—I want to know what service you rendered during the war to Government?

*Mr. Nabi-Ullah.*—We supplied cheap paper to Government: we made munitions also.

*President.*—Did you get controlled price?

*Mr. Nabi-Ullah.*—We have already given you these answers.

*President.*—What you want you to do is to state in a general way in what way you gave special assistance to Government during the war.

*Mr. Nabi-Ullah.*—We made some parts of munitions for them.

*President.*—What kind of munitions?

*Mr. Nabi-Ullah.*—We had to stop our own work for making shells.

*President.*—I think it would be easier if you could send us a statement of what you did during the war.

*Mr. Ginwala.*—We want to give the money value of your sacrifice. You should be able to say that it saved so much money to Government. We don't want any sentiment to come in.

*Mr. Nabi-Ullah.*—We will give you the material portion of it.†

*Mr. Kale.*—In your statement submitted to the Fiscal Commission you have stated that India enjoys the advantage of having abundant raw materials. I want to ask you whether you would now modify the view that you had expressed with reference to the abundance of raw materials.

*Mr. Nabi-Ullah.*—We don't wish to modify it ourselves but as a result of the cross-examination that statement will be modified a bit.

*Mr. Kale.*—That is why I am putting it to you. You see the supplies are getting more and more restricted as a result of competition.

\* *Vide* Statement II (g).

† *Vide* Statement II (h).

*Mr. Nabi-Ullah.*—Yes, the supply of Sabai grass.

*Mr. Kale.*—But Sabai grass is an important factor among your raw materials, and in that way this statement appears to require modification.

*Mr. Nabi-Ullah.*—The position is that we do not want to modify the statement ourselves, but no doubt the answers we have given to questions do modify this statement a bit.

*Mr. Kale.*—You have laid some stress on what Mr. Raitt has said about bamboo pulp. Certainly if bamboo pulp can be produced in abundance in India itself, the supply of your raw materials will be increased. But we do not know what is going to happen with regard to bamboo pulp. You know that the manufacturers of bamboo pulp are claiming protection and you are also in favour of that, and agree that there should be an import duty on pulp. You want imported pulp as well as paper to be subjected to a duty to help the manufacturers in India. It means that the price of your pulp will go up if an import duty is imposed upon foreign pulp.

*Mr. Nabi-Ullah.*—For the time being.

*Mr. Kale.*—So that even if pulp is produced in India on a large scale, for some years, in any case, your cost of production will go up. Have you considered that?

*President.*—You yourselves do not use imported pulp but some of your competitors do. If the import of foreign pulp is restricted they may go back to grass and the price of grass, etc., may increase.

*Mr. Nabi-Ullah.*—We have not considered that.

*Mr. Kale.*—That seems to be the probability of the case if the pulp industry is going to be protected. Your raw materials will increase in price and that will prove a sort of a handicap instead of improving your position as you expect. That is a matter which requires some consideration?

*Mr. Nabi-Ullah.*—Yes.

*Mr. Kale.*—You have also said that there is abundant cheap labour. Do you still think, when you are paying 200 per cent. more than what you used to pay, that labour is cheap?

*Mr. Nabi-Ullah.*—Cheaper than in Calcutta or Cawnpore.

*Mr. Kale.*—From the figures you have given there is hardly any increase in Calcutta while your figure is 200 per cent. You have given a statement showing the wages in a paper mill in Bengal in January of each year from 1914 to 1919 with index numbers, taking the rates for January 1914 (the pre-war period) as equal to 100. In the case of coolies, for instance, the index number for 1914 is 100 and for 1919 it is 100. In the case of machinemmen, the index number for 1914 is 100 and for 1919 it is 90. Instead of going up, the wages in Calcutta have gone down. How is it then that wages have gone up in Lucknow?

*Mr. Gobardhan Pershad.*—We have also reduced our wages since 1923.

*Mr. Kale.*—How is it that, on the whole, there has been an increase of nearly 148 per cent.?

*President.*—Where did you get your information from about wages in Calcutta?

*Mr. Gobardhan Pershad.*—From a mill in Bengal.

*President.*—Taking all classes of labour, there is a slight decrease in the wages in Calcutta between 1914 and 1919. That is very improbable, but you may be right.

*Mr. Kale.*—I don't understand how you can claim that your labour is cheaper than what it is in other places? So far as I know wages have not gone up 220 per cent. in any part of India.

*Mr. Nabi-Ullah.*—It may be we were paying coolies very low wages. They began to feel probably that they ought to get better wages.

*Mr. Kale.*—Were your wages abnormally low?



*Mr. Nabi-Ullah.*—May be abnormally low when compared to Calcutta or Bombay.

*Mr. Kale.*—Have wages in Lucknow now come up to the level of the wages in other parts of India?

*Mr. Nabi-Ullah.*—Yes.

*Mr. Kale.*—Let us look at the index numbers of the wholesale prices I have got here. Prices will probably be lower in Lucknow than they are in Calcutta. Taking them at the same level, however, I find that the general index number for all commodities has gone up from 100 to 176; so far as foodgrains, cereals and pulses are concerned, the index numbers are 114 and 112, so that prices have not gone up to the extent to which your wages have gone up?

*Mr. Nabi-Ullah.*—No.

*Mr. Kale.*—I cannot understand then how, in Lucknow, you have been compelled to pay that increase. Is it on account of competition that you have been compelled to pay such a high rate of wages?

*Mr. Nabi-Ullah.*—It is not so much a question of competition. We have got to deal with coolies. They come and ask for higher wages. If we don't agree to pay them, they go away.

*Mr. Kale.*—Take coolies, for instance. Do you pay them Rs. 25 a month?

*Mr. Nabi-Ullah.*—We pay Rs. 18-8-0.

*Mr. Kale.*—These wages have gone down since 1921?

*Mr. Nabi-Ullah.*—We have reduced them. We have been giving them increases on different grounds and under different heads, so much as war allowance, so much as famine allowance and so on. We sat together one day and said "we will reduce so much of war allowance." There was a little trouble at first but then in the end it was all right.

*Mr. Kale.*—The President asked you yesterday whether there had been any improvement in efficiency on account of the increase in wages. From what you say now I understand that wages were very low in your mill?

*Mr. Nabi-Ullah.*—Wages were low.

*Mr. Kale.*—So that this increase will not lead to efficiency until wages have been brought up to the level of the wages obtained elsewhere.

*Mr. Nabi-Ullah.*—How does the question of efficiency arise here?

*Mr. Kale.*—If a man gets higher wages, his productive power will naturally increase, because he will get better food, be in better health and will get better shelter.

*Mr. Nabi-Ullah.*—I am afraid that these things did not occur to us. With regard to Mistris, you might say that if we pay Rs. 60 instead of Rs. 30, they will do better work, but as regards coolies, we are not sure that if we pay them more they will do better work.

*Mr. Kale.*—Am I to take it that there has not been an improvement in efficiency on account of the increase in wages, especially among the unskilled workers?

*Mr. Nabi-Ullah.*—No. We do not give any increase because there has been a rise in efficiency.

*Mr. Kale.*—Take it the other way. Do they not produce more because you pay them higher wages?

*Mr. Nabi-Ullah.*—If I might hazard an answer, I should say that they are just the same.

*Mr. Kale.*—How can you then sustain the claim that labour is very cheap? You say in this note that abundant supplies of cheap labour are available in Lucknow.

*Mr. Nabi-Ullah.*—This is what we mean. There are coolies available but at prices which do not occur to us at the time as higher or anywhere near the wages that they can command in Calcutta or Bombay.

*Mr. Kale.*—I may suggest to you—I don't know how far it is true—that there is a lot of emigration of these coolies from the United Provinces and Bihar to Assam and Bengal. Is it on account of this competition that you have to face in Bengal and other provinces that you have to pay more wages?

*Mr. Nabi-Ullah.*—I should think not.

*Mr. Kale.*—Do you mean that the emigration of labour has nothing to do with it?

*Mr. Nabi-Ullah.*—This point never occurred to us. We always thought that enough people were available.

*Mr. Kale.*—Most of the industries in Bengal are manned from people from the United Provinces and Bihar.

*Mr. Nabi-Ullah.*—My impression is that there is no emigration of coolies, at any rate practically none, from the area where we draw our coolies from.

*Mr. Kale.*—You have not got that trouble?

*Mr. Nabi-Ullah.*—No.

*Mr. Kale.*—Have you considered the question that, if associated industries are to be developed in India, they would also claim protection for themselves for development? That means their prices will go up, if a protected duty is imposed on them? You say that unless associated industries are developed in India, you cannot get these things in this country, so that again what I pointed out in the case of pulp is likely to happen in the case of these industries?

*Mr. Nabi-Ullah.*—Somehow, it has occurred to us that if anything is produced in India, it will be cheaper.

*President.*—If that is so, why you are asking for protection?

*Mr. Kale.*—Simply because a thing is produced in India, it cannot be cheaper; on the contrary that is the reason why it ought to be dearer?

*Mr. Nabi-Ullah.*—Evidently that was our idea.

*Mr. Kale.*—Then you point out the national importance of the industry and so on. Don't you think that consumers in India will very strongly object to the raising of prices of paper as a result of protection? You yourself say that the development of India depends very largely upon the development of this industry. For instance, the spread of education requires a lot of paper; newspapers as well as schools and colleges require paper. Naturally, the consumers and the public in general will take very strong objection to the price of paper going up as a result of any measure of protection. You say that the industry is of national importance, but I look at it from another point of view, and say that paper must be as cheap as possible in order to facilitate the progress of the country. The result of protection may be quite the opposite? What have you got to say to that?

*Mr. Nabi-Ullah.*—Nothing.

*Mr. Kale.*—The progress of the country will be retarded if the price of paper goes up?

*Mr. Nabi-Ullah.*—Yes. This point of view did not occur to us.

*Mr. Kale.*—Naturally this is the objection that will be raised. They will say "Very well, this is an industry of national importance, but in order to promote national progress, you want books, paper, etc. If you are going to raise the price of paper, national progress will be retarded."

*Mr. Nabi-Ullah.*—I have nothing to say against this.

*Mr. Kale.*—That is the real difficulty?

*Mr. Gobardhan Pershad.*—Could not the industry be helped in other ways, viz., freight, concessions, etc.?

*Mr. Kale.*—Government will have to spend more in other directions, which means that additional revenue will have to be raised by taxation. We come back to the same thing only in a roundabout way. The tax-payer will say "This industry is of national importance, but what about our education? You are going to make it dearer." On the contrary in each province there

is a demand for compulsory primary education and expansion of all classes and grades of education, which means demand for more paper and there is less money available, as we all know, in the provinces for educational-development. That is the real difficulty. Do you also feel that?

*Mr. Nabi-Ullah.*—Yes.

*Mr. Kale.*—You have pointed out that it is just possible that the industry will be improved if profits are earned on a larger scale for some years, but I find that in your case there has been little progress in the organisation and equipment. You don't seem to have taken advantage of prosperous times to improve your machinery, organisation of the industry and so forth.

*Mr. Nabi-Ullah.*—It is like this. We have saved money. We have been thinking that we will buy a new machine. When we called for estimates we found that the price was so high that we could not order for it. It may be that it is a pious wish never to be fulfilled. During the war, for instance, we had all this money, or at any rate greater part of this money. Suppose we could get a new machine at a reasonable figure, reasonable to us, we should have invested the money at once. There is no doubt about that. So long as the war was going on, there was no chance of getting any machinery. Later on when we called for estimates, we found that it was Rs. 35 lakhs. I don't see how we could take advantage of the prosperous time. We have been waiting to grasp an opportunity. We thought that we were grasping it but we found that we were stuck up again.

*Mr. Kale.*—Will this be your answer to another question that may be put to you? You are asking for protection; for the last 10 years you had, for all practical purposes, protection on account of the prevailing high prices, and you did make large profits. After all, the object of protection is to allow the industry to make a reasonable profit. Ten years is a sufficiently long period. Yet, what is the result? You are where you were.

*Mr. Nabi-Ullah.*—We are where we were.

*Mr. Kale.*—Supposing protection were granted to you now for a period of 5 or 10 years, what guarantee is there that, at the end of that period, you will be better off? Past experience does not strengthen the hope that protection will benefit your industry. What answer have you to make to this?

*Mr. Nabi-Ullah.*—I have no answer to make.

*President.*—Supposing protection were given now for 5 or 10 years, it would be quite possible to purchase new machinery, whereas it was not possible to do so during the war, except from America, and the price would have been exorbitant.

*Mr. Kale.*—If you buy new machinery when protection is promised or granted actually, as we have already pointed out, the efficiency of the machinery may increase?

*Mr. Nabi-Ullah.*—Yes.

*Mr. Kale.* And consequently the productive capacity of the industry?

*Mr. Nabi-Ullah.*—Yes.

*Mr. Kale.*—The cost of production may also go down? That is one possibility?

*Mr. Gobardhan Pershad.* Yes, and one thing more. If protection were granted, it would be easier to obtain capital than it is now.

*Mr. Kale.*—Do you mean to say that the rate of interest will be lower?

*Mr. Gobardhan Pershad.*—I mean if new shares were issued, they would be subscribed for easily and quickly.

*Mr. Kale.*—And thus you will be able to get your capital much more easily?

*Mr. Gobardhan Pershad.*—Yes.

*Mr. Kale.* Will the rate of interest be favourably affected by the prospect of protection? Do you think that you would be able to borrow at a moderate rate of interest?

*Mr. Nabi-Ullah.*—Our usual interest is 7½ per cent. We have been dealing with the Allahabad Bank for years and years and I don't think protection or no protection will make any difference.

*Mr. Kale.*—There is another point. Will not the prices of some of the auxiliary raw materials you are using, go down? During the last year they were very high.

*Mr. Nabi-Ullah.*—We hope that they would go down.

*Mr. Kale.*—In the near future, they might go down further and your cost of production, *pro rata*, may be brought down?

*Mr. Gobardhan Pershad.*—They are already going down.

*Mr. Kale.*—Again, you have been able to reduce your wages to a certain extent. They are lower than what they were in 1921?

*Mr. Nabi-Ullah.*—Yes.

*Mr. Kale.*—Wages may be reduced? Is there that prospect?

*Mr. Nabi-Ullah.*—There is a good deal of prospect. I don't know whether it was due to a bit of nervousness on our part that we did not cut down the wages a bit more. Foodstuff is much cheaper than it used to be. We might still have an increase on the wages of 1914 but not very much.

*Mr. Kale.*—Do you think that it is possible to reduce wages?

*Mr. Nabi-Ullah.*—I think that it is possible.

*Mr. Kale.*—These are the only factors which occur to you which will go to benefit the industry and reduce the cost, viz., that your machinery may be more productive than it is now, if you buy new machinery, and that it will reduce the cost of production; that you may be able to borrow much more easily than you are now able to do, that prices of some of the raw materials may go down and that wages also may go down?

*Mr. Nabi-Ullah.*—Also the price of machinery may go down.

*Mr. Kale.*—That is also another factor?

*Mr. Nabi-Ullah.*—Yes.

*President.*—Your reply to Question 132 (C) is not a positive answer. It is purely hypothetical. After all Government have done a good deal for the paper industry already in the way of research. It is going on now. But a certain amount of obligation rests on the industry itself in this matter. Government cannot, so to speak, bear the whole burden. As to the question whether the paper industry will ever be able to face world competition without protection, on the evidence given by your firm, there does not seem to me to be a strong case. You told the Fiscal Commission that before the war the paper industry was in a precarious condition after about 30 years of existence. After the war, your condition is even worse than precarious, and the best you can say is that at the end of 25 years, granted certain conditions, it is possible that you may be able to stand alone. Unless the question of raw materials is cleared up by the use of bamboo or something of that kind, I should say that on the evidence you have given, so long as the industry is dependent on grass and things of that kind, the odds are heavily against it. However, I don't want to spend too long over that.

Again your reply to Question 135 does not help us very much. We are not really interested in the making of hand-made paper. We are concerned with the machine-made paper. There is nothing in these passages which bears on the question whether the future of the industry is suitable to Indian economic conditions.

In reply to Question 136 you claim that protective duties should be imposed on all qualities of paper which the Indian mills produce as mentioned in your reply to Question 8. If you frame the Tariff Schedule on the basis of your answer to Question 8, there may be different kinds of paper which compete with your manufactures.

*Mr. Nabi-Ullah.*—Produced by other Indian mills?

*President.*—Quite possible. In making proposals we do not want to put protective duties on foreign paper which does not really compete with paper produced in the country.

*Mr. Nabi-Ullah.* For that reason we have mentioned certain difference only on those qualities of paper which we are making.

*President.*—Do you think that that would cover it?

*Mr. Nabi-Ullah.*—At least for our purposes that would.

*President.*—You could hardly put Government water-marked paper in the Tariff Schedule.

*Mr. Nabi-Ullah.*—That is not imported: that is always bought in India. There are difficulties in its being imported.

*President.*—If Government can get it cheaper outside in the absence of a protective duty they will always purchase from outside. Is "water-marked paper" a well-understood trade description?

*Mr. Nabi-Ullah.*—Yes.

*President.*—Then it would apply to all paper that is water-marked. Could not that include a good deal of paper that does not compete with you?

*Mr. Nabi-Ullah.*—Water-marked paper is a paper on which court petitions and things like that are to be written and all of which are known water-mark of the Government of India. They are technically called "water-marked."

*President.*—The point is this: You cannot put a duty on a thing because it has the water-mark of the Government of India. That is not the criterion. My point is this: supposing you put protective duties on all water-marked paper, would not that have the effect of putting a protective duty on certain kinds of paper—very superior water-marked paper—which is not produced in this country. Are there different qualities of water-marked paper?

*Mr. Nabi-Ullah.*—A large number of them.

*President.*—Would the more expensive kinds compete with yours?

*Mr. Nabi-Ullah.*—We do not make these.

*President.*—How is the Board to frame a schedule so as not to raise the cost of superior qualities unnecessarily?

*Mr. Nabi-Ullah.*—You want the specific qualities to be known.

*President.*—How can we give such a description that the Customs people will be able to understand and distinguish one from the other? It is a difficult question we have got to consider.

*Mr. Nabi-Ullah.*—Probably we will have to give the sizes, weights, etc., of these papers which we want to be protected.

*President.*—That might be possible. There is another way of doing it. Do you happen to know roughly what is the difference between the highest priced paper and the lowest priced paper of that kind, what it would vary from?

*Mr. Nabi-Ullah.*—We cannot tell. The Controller of Stationery might be able to let you know.

*President.*—We sometimes do that by putting a specific duty on all paper: it is less *ad valorem* as you get to higher prices. However, we need not trouble about it now.

You have given us a statement showing the freight on finished paper. We have also asked you to give the rates on primary raw materials.

*Mr. Nabi-Ullah.*—Yes.\*

*Mr. Ginwalla.*—In your conclusion, paragraph 2, you say, "It is feared, as a result of protection, that new mills, with large foreign capital, might be started in the near future to compete with *bona fide* Indian mills. In order to safeguard the interests of the Indian mill we respectfully beg to suggest that there should be at least two-thirds of the Indian capital and two-thirds of the Indian Directorate in the case of foreign mills."

\* *Vide* Statement II (d).

*Mr. Nabi-Ullah.*—By "foreign mills" we meant new mills that may be started.

*Mr. Ginwala.*—Have you considered this point fully or is it that you have taken this all from the discussions that you have read? I mean, are you serious about this?

*Mr. Nabi-Ullah.*—Yes.

*Mr. Ginwala.*—Have you really considered it from the point of view of India or have you considered it merely from your own? It is a very serious proposal that you are making and we want to know whether you have fully considered it.

*Mr. Nabi-Ullah.*—We have not thought much over that.

*President.*—There are two aspects. One is what Mr. Ginwala has just been putting to you: Is it in the interests of India as a whole that its industrial development should be retarded by shortage of capital? That is one point that arises. You are, of course, entitled to hold the opinion, if you do hold it, that India has got enough capital.

*Mr. Nabi-Ullah.*—I do not think we have considered that point at all. As you said some of us have been reading something and we put it down here.

*President.*—Then there is the practical difficulty. If you want to protect by means of tariff duties, how are you going to provide for this, unless you put a special excise duty on the new foreign mills? The protective rains will descend on the just and on the unjust alike.

*Mr. Kale.*—Or do you want to modify the law of registering companies?

*Mr. Ginwala.*—I was not referring to the procedure by which effect could be given to this.

With regard to these raw materials, could you adapt your machinery to other raw materials besides Sabai grass?

*Mr. Nabi-Ullah.*—What should be the other raw materials?

*Mr. Ginwala.*—Other kinds of grasses, bamboo, etc.

*Mr. Nabi-Ullah.*—Bamboo, if it is pulped, we can, but if it is in the raw form and to be pulped at our place, we cannot do it. In that case we have to change our boilers, breakers and bleachers.

*President.*—Are you sure?

*Mr. Nabi-Ullah.*—We can use bamboo for making pulp by making slight alterations: we have simply to change our boilers.

*President.*—Have you made any experiments?

*Mr. Nabi-Ullah.*—Yes, but some parts of our machinery will not be quite efficient. The boiler will have to be changed.

*President.*—Have you taken any expert advice on the subject?

*Mr. Nabi-Ullah.*—Mr. Raitt of Dehra Dun came to our place two or three times and gave us some hints about it.

*President.*—Did he advise you that some part of the machinery could be used for making paper out of bamboo pulp?

*Mr. Nabi-Ullah.*—Yes. But the pulp-making machinery will have to be altered, i.e., about a third of the machinery.

*Mr. Ginwala.*—Can the alterations be carried out without any difficulty?

*Mr. Nabi-Ullah.*—Yes. We will have to get new boilers and a little bit of steam plant, digesters and cutting machines.

*Mr. Ginwala.*—Have you enquired whether there is any bamboo in the neighbourhood of your mill?

*Mr. Nabi-Ullah.*—No, not in sufficient quantities. It is also a very inferior quality.

*Mr. Ginwala.*—With regard to other grasses you have not made any experiments except with *Moonj*?

*Mr. Nabi-Ullah.*—No. In fact we have been using Moonj for years but when the prices went up we could not use it.

*Mr. Ginnala.*—You can adapt your machinery to other kinds of grasses?

*Mr. Nabi-Ullah.*—If they are about the same quality. We cannot think of any other grass that can be substituted for Sabai. Mr. Raitt made experiments with other grasses.

*President.*—It is possible that experiments going on at Dehra Dun might result in something valuable.

*Mr. Nabi-Ullah.*—Other kinds of grasses could be used in these boilers, but we have not got any other grasses near. That is the point.



सत्यमेव जयते

## Witness No. 3.

## Bengal Paper Mill Company Limited, Calcutta.

## A.—WRITTEN.

*Statement I.—Replies to questionnaire received from the Bengal Paper Mill Company, Limited, Calcutta, dated 21st June, 1924.*

We herewith send you six copies of our reply to the questionnaire issued by the Board with reference to the Paper Industry.

This form has been filled in as fully as we are able from our records, but we have found it impossible to answer in their entirety some of the questions; this is explained, however, in our replies.

We would ask that our replies to Questions 8, 20, 48, 49, 109 and 111 be observed as confidential.\*

If there is further information we are able to give, we shall be happy to do so, otherwise the undersigned will attend at Simla to offer oral evidence in the week ending 5th July.

## REPLIES TO QUESTIONNAIRE.

## I. INTRODUCTORY.

1. Bengal Paper Mill Co., Ltd., Public Registered Co., established in 1889.
2. About one-third of the capital of the Company is held by Indian shareholders. There are one Indian and three British Directors. There are no Indians on the superior management of the mill.
3. The mill manufactures paper only.
4. The mill commenced to manufacture in 1891.
5. The full capacity of the mill is about 700 tons per mensem.
6. The outturn for the past 15 years has been as follows :—

	Tons.
1909 . . . . .	5,280
1910 . . . . .	5,482
1911 . . . . .	5,950
1912 . . . . .	6,151
1913 . . . . .	6,198
1914 . . . . .	6,065
1915 . . . . .	6,597
1916 . . . . .	6,619
1917 . . . . .	6,528
1918 . . . . .	6,093
1919 . . . . .	6,007
1920 . . . . .	6,010
1921 . . . . .	5,982
1922 . . . . .	6,205
1923 . . . . .	6,565

7. The mill is at Raneegunge, near one of its chief grass fields, in the middle of the coal districts and has been able to build up an adjacent labour

\* The objection was subsequently withdrawn with regard to replies to all these questions except part of No. 20.



supply. It is somewhat removed from the important market of Calcutta, but is *en route* to the up-country markets. The most important factors in selecting a site for a paper mill are, we consider, water, coal and raw materials.

8. The chief classes of paper manufactured are :—Printings, Writings, Blottings, Azures & Antiques, Badamis, Browns, Colours & Unbleached, and the average percentage of the total output for the past five years is as follows :—

	Per cent.
Printings . . . . .	84.77
Unbleached (Government) . . . . .	27.06
Badamis . . . . .	18.38
Browns . . . . .	10.46
Azures . . . . .	4.96
Writings . . . . .	3.81
Blottings . . . . .	2.20
Antiques . . . . .	1.19
Colours . . . . .	1.17

9. Trade Classifications are :—Hand-made, Wove & Laid papers. No low grade papers are made by this Company, the material in use rendering it possible to make all papers good of their kind. The classes of paper rendered most easy of manufacture by the raw materials are :—Printings, Writings & Badamis.

10. In order to meet the requirements of various Users, particularly Government, it is necessary to make the above classes of paper, although it is highly desirable to make as few kinds as possible. The objection to several varieties is increased cost of production and decreased output. Although from import returns, figures indicate the possibility of mills restricting their varieties of paper, in practice, it is found that all big paper dealers in indigenous papers require various kinds. The tendency of increased output by Indian mills would be for mills to specialise in manufacture.

11. The manufacturing process of the Company is the caustic soda process.

## II. RAW MATERIALS.

### A.—Primary.

12. The primary raw materials used are :—Grass, jute, rags, hemp, waste papers and imported pulp.

13. The above materials have been used on the average in the following quantities during the last three years :—

	Tons.
Grass . . . . .	6,500
Pulp . . . . .	2,500
Rags & jute, etc. . . . .	1,250
Waste paper . . . . .	1,051

N.B.—The proportions of these materials have been largely dictated by the necessities of the situation rather than by selection.

14. and 15. The following quantities of raw material are required to make one ton of paper :

	Tons.
Grass . . . . .	8
Wood pulp . . . . .	1.20
Hemp, jute, etc. . . . .	1.55
Rags . . . . .	2.25

16. This question we find impossible to answer, as on the cost of transport largely depends the availability of raw material, the supply of which is indefinite.

17. Grass is collected from Chota Nagpur and the United Provinces and is brought from the forests by bullock carts, camel trains, bullocks and railways. Accompanying map indicates the sources of supply.

18. Transport by other than railway is generally under 25 miles.

19. Royalty varies from Rs. 24 per ton of grass (or Rs. 72 per ton of paper) in the United Provinces to Rs. 6-12 per ton of grass in Chota Nagpur; the former figure can be reduced by half when labour and freight are available for the collection.

20. Our returns permit the following comparison of the prices of raw materials between 1914 and 1923:—

	1914.	1923.
	Rs. A. P.	Rs. A. P.
Royalty—		
(Chota Nagpur grass, average)	5 0 0	9 4 6 per ton.
Freight . . . . .	5 14 0	9 0 0 „
Other charges . . . . .	27 2 6	37 15 6 „
	<hr/>	<hr/>
Total D/D Mills . . . . .	38 1 6	56 4 0
	<hr/>	<hr/>

21. We hold forests from Government and Indian States for varying periods on varying terms. On neither score has the Company any complaint, but the restricted period for collection of grass from the forests makes it often impossible to collect the full quantity available. Collection would be assisted were it allowed throughout the dry season. In view of the fact that grass would be largely burnt if not collected by the Company, the royalty is unduly high.

22. The supply of grass varies primarily with labour conditions and in a degree with the monsoon, but generally we have no great falling-off to note for a period of many years' collection.

23. The area of collection of grass has been extended owing to the calls on labour from other industries, making it necessary to go farther afield to obtain a sufficiency. Another factor of considerable influence was the high cost of wood pulp during the War and favourable prices for paper, making it possible profitably to pay larger sums for transportation than is normally possible.

24. Our records do not permit us to answer this.

25. We have no fear as to the sufficiency of our raw materials in future, apart from difficulties of railway transport.

26. As already mentioned, the supply of grass is largely dependent upon labour and transport; eliminating these two factors, there has never been a time when ample grass has not been available for our requirements, in spite of competition from other mills. Extension of the railway system opens up vast areas, and we look upon the supply of suitable paper making material in India as unlimited.

27. We believe present areas will produce very much larger supplies of sabai than they have yielded in the past, but the production depends upon the supply of labour.

28, 29 and 30. Hitherto, pulp as a finished article has not been produced from bamboo in practical quantities. Paper has been made from bamboo as

from many other materials, but it has yet to be proved whether it can be made more cheaply from bamboo than from materials that have been in use for a very much longer period. Our experience in paper making from bamboo is restricted to a few mill experiments.

31. We know of no grass in India that can in any way compare with sabai for making papers comparable to esparto papers.

32. Rags are in ample supply for low class papers but not for the higher class, such as are made from linen rags at home.

33. The only difficulties in obtaining leases of Government forests have arisen from the natural desire of Forest Officers to show good commercial results from their areas, and as before stated, we consider the industry has had to pay too much in the shape of royalty.

34. We find it necessary to import wood pulp, not only because it is a necessary constituent for certain classes of paper which cannot be replaced in this country, but also and chiefly because it proves of invaluable assistance in keeping machines running when from any cause, mechanical or labour, the Preparing Plant of the mill may cease to function. The pulp we import is chiefly easy bleaching wood pulp from Norway or Sweden, costing:—

£14 per ton f.o.b. Gottenberg Port.

Freight and insurance charges £1-3-9d. per ton.

Landing charges, Rs. 4 per ton.

Transport from Port to Mill, Rs. 7-11-9 per ton.

Customs duty is at present nil.

33. Freight concessions from the railway are under consideration and will bring us much needed relief in making freights approximate to pre-war figures. Railway freights are high in consideration of the value of the materials collected for paper making. For instance, the freight before the War on a maund of paper from Hamburg to Raneeegunge was Re. 0-14-8, while freight on grass sufficient to make a maund of paper was Re. 1-5-0 per maund from the Nepal fields. At present these rates compare as follows:—

From Hamburg on paper	Rs. 27-15-9 per ton paper.
From Nepal on grass	Rs. 39-8-9 per 3 tons grass or 1 ton paper.

#### B.—Auxiliary.

36. The approximate requirements per annum of auxiliary raw materials for the past three years has been as follows:—

	Tons.
Alkali . . . . .	300
Caustic Soda . . . . .	400
Rosin . . . . .	150
Bleach . . . . .	600
Aluminoferrie . . . . .	450
China Clay . . . . .	1,000
Lime . . . . .	1,050
Dyes . . . . .	3
Yellow Ochre . . . . .	300

37. For the manufacture of a ton of finished paper, the following auxiliary raw materials are approximately required:—

	Per cent.	Per cent.
Bleach . . . . .	8	to 12
Caustic . . . . .	14	to 15
Clay . . . . .	10	to 20
Rosin . . . . .	2	to 3
Aluminoferrie . . . . .	...	5

38. Bleach is imported from England; aluminiferous, china clay, caustic soda and alkali are in part from England and in part of local origin, rosin is obtained locally. The following are the particulars asked for under :—

## A.

Bleach.	Aluminiferous.	China Clay.
a. England.	England.	England.
b. £9-12-6 per ton.	£4-10-6 per ton.	£3-6-6 per ton.
c. Calcutta.	Calcutta.	Calcutta.
d. £3-5-0       ,,	£1-7-6       ,,	£2-0-0       ,,
e. Rs. 4       ,,	Rs. 4       ,,	Rs. 4       ,,
f. Rs. 8-4       ,,	Rs. 8-4       ,,	Rs. 8-4       ,,
g. 15% on £ 12-10-0	15% on invoice val.	15% on Rs. 85.

## B.

	Rs.   A.   P.	Rs.   A.   P.
Alkali . . . . .	118   0   0 per ton.	10   4   0 per ton.
Caustic . . . . .	310   0   0       ,,	10   4   0       ,,
Rosin . . . . .	220   0   0       ,,	22   0   0       ,,
Lime . . . . .	16   0   0       ,,	16   0   0       ,,
Yellow Ochre . . . . .	30   0   0       ,,	3   7   0       ,,

Alkali and caustic are manufactured by the Magadi Soda Co., Budge Budge, and rosin by the Government Rosin and Turpentine Factory, Bareilly; lime from Katni and Sylhet; yellow ochre from Arjandas Biliari Lal, Nallati. No chemicals are made in the mill.

39. As shown above, many of the auxiliary raw materials are manufactured in India, and as efficiency in manufacture improves, the mill will depend more completely on local materials. The manufacture of bleach is we understand, not contemplated in India, except by the factory immediately requiring chlorine, and difficulties of manufacture are likely to prevent this being a purchasable commodity. Dyes are also likely to remain an importation. Indian china clay is not of such fine quality as the English clay, but may prove susceptible to treatment.

## III. LABOUR.

40. Our raw materials are chiefly collected by contract and we have no exact records of labour used, but we estimate the number of hands required for grass alone to be approximately 3,000 to 3,500, thus the wages for this labour are impossible to estimate. Our various collecting Agencies advise us

that wages have increased from 80 per cent. to 100 per cent. as compared with 1913-14, and this coincides with our experience with unskilled labour in other sections of the mill's activities. An approximate figure for cutting grass, which varies in different districts, may be taken at Re. 0-6-0 to Re. 0-10-0 per maund, and our coolies can easily cut  $\frac{3}{4}$  of a maund, to a maund per day.

41. The difficulties in securing labour for the collection of grass are not greater than those encountered by other employers of labour, with the exception that grass must remain a cheap material if it is to compete with foreign pulp, as a basis for paper making.

42. In the United Provinces fields, labour has to be collected from 200 to 400 miles away, and owing to keen competition, it is often not available in full supply.

43. The labour used is untrained.

### B. Mill Labour.

44. Considerable expert supervision by skilled imported labour is requisite, for paper making has many branches where expert knowledge is required, which is only gained by severe training from boyhood upwards.

45. Fourteen Europeans are employed at Ranecunge, and this number has to be maintained whilst the whole factory is running, regardless of output.

46. Indian labour has proved quick to work in subordinate skilled positions and a large labour has been building, which is efficient in its various branches. It has not so far proved capable of supervisory appointments, for although several Indians have presented themselves for training and been given every facility, they have, without exception, failed to carry through the training which is required to make an expert supervisor, and have generally left the mill after acquiring superficial knowledge. The mill has always been ready to give opportunity to Indian workmen, for the Company would be glad to secure efficient local supervisors.

47. At present the wages paid to Paper Makers may be taken as Rs. 450 to Rs. 500 per mensem and £20 in the United Kingdom.

48 and 49. Some 1,200 hands are employed at Ranecunge. In 1919 the total wages for Indian mill labour were Rs. 1,09,345 and in 1923 this amount had increased to Rs. 2,87,968. The average cost for Indian mill labour per ton of paper was Rs. 18-0-7 in 1914 and Rs. 43-13-9 in 1923. The average wages per man in the different classes in 1917 and 1923 are as follows: 1917 is the earliest year available.

	1917.	1923.
Fitter . . . . .	@ Rs. 20 per month of working days.	Rs. 30
Khalasie . . . . .	10	17
Blacksmith . . . . .	30	45
Fireman . . . . .	17	27
Coal Coolies . . . . .	12	18
Ash Coolies . . . . .	10	16
Finishing House Coolies . . . . .	10	18
Finishing House Women . . . . .	6	11
Machine and Bester Sirdars . . . . .	18	30
Masons . . . . .	15	28
Women of various Departments . . . . .	4-8	8
Coolies of various Departments . . . . .	8	17

Grain allowance of 10 per cent. on wages was allowed from June 1919 to September 1919 and 20 per cent. from September 1919 to November 1919. In December 1919 a further 10 per cent. was allowed and on the workers getting a 50 per cent. increase in January 1921, the grain allowance was stopped. Since January 1921 they have been paid extra at above rates for 13 recognised holidays and since June 1921 extra at above rates for Sundays, although they do not work, on Sundays.

50. The labour force for the mill is sufficient and lives in the vicinity of the mill. It is unreliable, however, as at the above rates wages are earned which make the regular attendance by the individual unnecessary.

51. The Indian labourer undoubtedly improves with training, but in most operations he requires leading and his sense of responsibility is undeveloped. His efficiency, as reflected in the hands employed, is probably as 4 to 1.

52. The Company provides lines for about  $\frac{1}{2}$  of the labour force and is prepared to offer more housing accommodation, but labour prefers to live in its own adjacent villages. Free medical attendance is given and the water supply and sanitary conditions are supervised in the mill lines.

#### IV. POWER INCLUDING FUEL.

53. The main power is steam, supplemented by a 50 per cent. addition of electrical power.

54. Electrical power is generated at the mill.

55. Coal is the fuel in general use and is amply available.

56. The total fuel consumption is approximately  $6\frac{1}{2}$  tons of coal per ton of paper.

57. The cost of coal varies as several qualities are used. First class Raneeunge coal costs approximately Rs. 10-8-9 per ton, the freight on which is Re. 0-18-3 per ton, while coal mined adjacent to the Company's mill is paid for at State Railway contract rates and carries no freight.

58. The Company buys its coal from various suppliers and owns no colliery of its own.

59. Nil.

#### V. MARKET.

##### *For Paper.*

60. These figures are not published, but we estimate the average production for the past five years has been 32,000 to 35,000 tons per annum, and we think this figure is about the same as applied in pre-war days.

61. The probable requirements for paper in India appear to be about 95,000 to 100,000 tons, of which there seems no reason why 85,000 to 90,000 tons should not be made in this country.

62. From experience in the past, it is likely that the general expansion of India will be reflected in increased paper requirements.

63. The produce of the mill is sold all over the country, mainly to best advantage in the large towns comparatively near the mill and far from the seaports.

64. It is only in seaports and in towns near seaports that the sale of Indian papers is handicapped as compared with foreign papers on the score of internal transit charges.

65. The export of paper from India does not seem a practical proposition at the present time, there being an ample market in India for all Indian production.

66. The paper sold to Government during the past 10 years and the prices realised are as follows :—

	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A.
H. B. . . . }	0 2 1½	0 2 1½	0 2 5½	0 4 10½	0 5 16
H. B. Cartg. . . }					
Azure Laid . . .	0 2 6½	0 2 6½	0 2 11	0 5 11½	0 7 0
White Cartg. . .	0 2 2	0 2 2	0 2 6	0 5 1½	0 5 9
Cream Wove Bank . .	..	..	0 4 9	0 9 9	..
Unbleached . . .	..	..	..	..	0 5 3½
Tons .	3157	2792	2676	2676	3065

	1919-20.	1920-21.	1921-22.	1922-23.	1923-24.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Unbleached Ptg. . .	0 5 3½	0 4 9	0 6 9	0 4 0	0 3 10½
H. B. Cartg. . . .	0 5 10½	0 5 4½	0 7 6	0 4 6	..
White Cartg. . . .	0 5 9	0 5 3	0 7 6	0 4 6	0 4 1½
Azure Laid . . . .	0 7 0	0 6 6	0 7 8	0 5 6	0 5 2½
Cream Wove Bank . .	0 9 9	0 9 0	0 10 6	..	..
Unbleached Cartg. .	..	..	..	0 4 4½	0 3 10½
White Ptg. . . . .	..	..	..	..	0 4 1½
Tons .	2715	2714	2790	2435	1854

The prices at which paper was sold to Government during the war were 25 per cent. to 40 per cent. below the prices ruling in the bazaar, and as a general rule, Government prices are 15 per cent. below market rates.

67. The smaller newspapers use indigenous papers, but the larger papers require a class which cannot be made in India, being chiefly made of mechanical pulp.

#### B.—For Pulp.

68 to 72. As we are not contemplating the manufacture of pulp for sale, we do not deal with this question except to emphasise the fact with regard to No. 70, that for certain classes of paper, sulphite wood-pulp from abroad will be necessary, however big the supply of bamboo pulp.

## VI. FOREIGN COMPETITION.

*Paper.*

73. The chief competing foreign countries are the United Kingdom, Scandinavia, Finland and Germany.

74. The papers where we meet the keenest competition are good class esparto grass papers and high class rag papers, also papers made from sulphite pulp only. Good class writings, banks and stamp papers are made from these materials: also blottings.

75. The foreign papers competing with our papers are chiefly made from wood pulp, esparto grass and rags.

76. The following are the comparative prices for foreign and local papers during the years specified:—

	1912.	1913.	1914.	1917.	1918.	1921.	1922.	1923.	1924.
<i>Local—</i>									
Printings	0 2 2	0 2 2	0 2 2	0 6 2	0 7 7	0 5 8	0 4 9	0 4 9	0 4 6
Writings	0 2 4	0 2 4	0 2 1	0 6 2	0 7 7	0 6 2	0 5 0	0 5 0	0 4 6
Browns	0 1 0	0 1 0	0 1 0	0 3 9	0 4 3	0 3 9	0 3 6	0 3 4	0 3 1
<i>Foreign—</i>									
Printings	0 1 1	0 1 1	0 1 1	0 5 0	0 6 0	0 6 6	0 4 9	0 4 3	0 4 3
Writings	0 2 3	0 2 3	0 2 3	0 5 3	0 6 6	0 7 0	0 5 3	0 4 6	0 4 6
Browns	0 1 1	0 1 1	0 1 1	0 3 0	0 3 6	0 5 9	0 3 0	0 2 0	0 2 0

77. Our information is gained by the Company's salesmen and its brokers and agents with regard to the prices of imported papers and particular care is taken to check these figures as the mill's prices are so largely influenced accordingly. Also the mill has expert reports from paper salesmen in England indicating prices, and we consider the information we act on is entirely reliable.

78. Quotations in "Trade Journals" approximate to the rates at which business can be transacted, but as stated in No. 77, we do not rely on this source for arranging our selling prices. Paper is often obtainable below the quoted rates, the reduction being dependent on the keenness of the seller for business, the quality in question, the weight of the paper and other considerations. For these reasons a 5 per cent. to 7½ per cent. reduction may be secured on a quiet market.

79. Our Home correspondence and "Trade Journals" entirely coincide as to the keenness of English mills securing orders for India and elsewhere at prices which leave no profit, but which enable them to keep the mills running and thus reduce standing charges per ton of paper.

The following extracts from our Home Expert's reports will bear on this point:—June 1923 "The plain truth is that a good many of our mills are selling paper at a distinct loss, particularly those classes of paper which include E.S. Writings and Printings, Wrappings and Common Book papers. It is difficult to appreciate this condition of the market, but the most likely explanation is that the Home demand is poor and would be still further depressed by a general advance in prices." February 1924. "While some mills are busy enough to keep all machines going on full output and others are handicapped for lack of orders, the complaint is general that prices are unremunerative. The wood pulp mills say they are selling Printings and Writings at ¼ per lb. below cost." April 1924 "The free Wood Mills are



endeavouring to secure an extra  $\frac{1}{4}$  per lb. on their papers. These mills are not making profits and many of them are carrying on under great difficulty.

The following is an extract from the "World's Paper Trade Review" of May 16th, 1924:—"The prices named by the Scottish correspondent of the World's Paper Trade Review as prevailing figures for esparto and wood free papers serve to show a difference in market values which certainly appear to exist. Esparto paper at  $3\frac{1}{4}$ d. per lb. for making is a very near thing if costs are anything to work on, and yet there are undoubtedly some mills taking orders at the price. It is almost an unknown price among consumers, however, the bulk of whom are quite accustomed to paying  $3\frac{1}{4}$ d. per lb. for second quality esparto and 4d. per lb. for first grade. In practice it is impossible to sell below these figures with any hope of decent profit."

80. This Company feels foreign competition chiefly in Bombay, Madras and Calcutta.

81. Apart from English and Scotch Mills, which are dealt with in Answer 79, Continental Mills have been assisted by exchange and the lower standard of wages which are received on the Continent in comparison with the United Kingdom. Since the War, American competition has not been very apparent, and Japanese has fallen off a lot in face of the cheap papers which can be landed in India.

82. We give herewith comparative figures of rates of freight from our mill and from foreign ports of exportation, these latter including sea freights and landing charges:—

B. P. M.	B. P. M.	Imported to Calcutta and railed up-country.	
	Rs.	Rs.	
Allahabad . . . . .	12 8 0 a ton	51 8 0 ton	Rates taken for wagon loads (300 mds.). Freight on imported papers by sea taken at £2-5-0 a ton plus 10% for clearing, etc.
Cawnpore . . . . .	16 8 0 "	55 8 0 "	
Delhi— <i>via</i> Calcutta . . . . .	23 0 0 "	61 0 0 "	
Delhi— <i>via</i> Bombay . . . . .	..	76 13 0 "	
Lahore— <i>via</i> Karachi . . . . .	45 0 0 "	74 6 9 "	
Calcutta . . . . .	5 0 0 "	35 4 0 "	Imported to Bombay freight £. 1-15- $\frac{1}{2}$ .
Madras . . . . .	50 0 0 "	35 0 0 "	
Bombay . . . . .	57 0 0 "	40 0 0 "	

83. The following are examples of railway freights:—

B. P. M.	Distance from Runcesgaunge.	Rate per md. per mile wagon loads.	Rate per md. per mile small lots
	miles.	pies.	pies.
Allahabad . . . . .	392	22	41
Lucknow . . . . .	495	29	45
Cawnpore . . . . .	512	23	43
Delhi . . . . .	782	21	43
Lahore . . . . .	1,092	29	41

81. We have no evidence to offer in the direction of Continental papers coming out from England.

85. Compared with foreign manufacture, the Indian mills are undoubtedly encountering far more difficulty than Home manufacturers.

- (a) The upkeep of plant and machinery is very much heavier and has to be maintained without the assistance of machine makers, which is so easily gained at home.
- (b) The cost of expert labour, as mentioned in No. 47 is considerably higher, whilst
- (c) The efficiency of ordinary labour is so much lower.
- (d) The collection and transport of primary raw materials has to be undertaken by the mill, whereas in the United Kingdom materials are obtainable from middle men in competition with each other, and consequently are supplied at the minimum of effort to the mills.
- (e) Auxiliary raw materials and consumable stores are generally no more costly to the Indian than to Home mills, excepting freight and duty. Deterioration is a danger to be guarded against in some stores, while the necessity for the maintenance of stocks of materials purchasable by Home mills at short notice, is a distinct disadvantage for Indian mills.
- (f) The chief disadvantages with regard to freights on finished goods are those mentioned in 63 and 64.
- (g) Stocks of spare parts have to be heavy owing to the time it takes to replace breakages from home. The expansion of the Engineering Industry, however, is lessening the disadvantages in this direction.
- (h) Serious losses are not infrequently caused by damage done in opening goods for Customs examination, and duties levied upon our chief requirements are as follows :—

	Tariff value.
Bleaching Powder, 15% . . . . .	on Rs. 12 8 0 per cwt.
China Clay, 15% . . . . .	„ 85 0 0 per ton.
Caustic Soda—Solid, 15% . . . . .	„ 17 8 0 per cwt.
„ „ —Flake, 15% . . . . .	„ 23 0 0 „
„ „ —Powdered, 15% . . . . .	„ 22 0 0 „
Aluminoferric 15% . . . . .	„ Invoice value.
Resin, 15% . . . . .	„ „
Sulphite of Alumina 15% . . . . .	„ „
Machinery Parts—Felts, 2½% . . . . .	„ „
„ „ —Jackets, 2½% . . . . .	„ „
„ „ —Wires, 2½% . . . . .	„ „
„ „ —Belting, 2½% . . . . .	„ „
Wood Pulp . . . . .	Free.

- (i) The raising of capital at present in India for Paper Mills would be very expensive, if not impossible; this remark, however, applies to several industries, but we think in the ordinary course, the Paper Industry would have to pay about 3 per cent. more for its capital in this country than in Europe.

For many years the Company has not had to erect machinery other than it could do under the supervision of its own expert staff, so we are unable to give definite figures as to the comparative cost of erecting machinery in India and England. Under existing circumstances out here and at home, we doubt if there is much difference in favour of either country.

86. Nos. (a), (d) and (i) are permanent disadvantages, while (b), (c), (e), and (g) are likely to be diminished in their intensity, although remaining for many years, (f) and (h) are disadvantages, the incidence of which remains very largely in the hands of Government and the Railways.

#### VIII. EQUIPMENT.

87. The Bengal Mill is amply large to be an economical unit, the minimum of which, we should say, would be two machines making 3,500 tons annually.

88. Both pulp and paper require expensive and elaborate machinery.

89. About 60 per cent. of our total capital outlay was incurred on plant and machinery, the majority of the remainder being on buildings.

90. The mill has for paper making machines with its supplementary preparing plant for dealing with the various classes of raw materials handled; it is also fitted with various saving plant, and the whole has been brought into good and modern conditions during the past few years.

91. We consider the mill at Raneegunge compares favourably with the large majority of mills making similar class of paper in the United Kingdom.

92. Methods of paper making have remained unaffected, except in small particulars where improvement is always taking place, during the past 10 years.

93. Bringing the plant up-to-date has improved without altering processes at the mill, but labour troubles have prevented the Company reaping the consequent advantages, except in regard to electrification, which has been applied to about one-third of the mill.

94. We contemplate no replacements or extensions other than those under completion at the present time.

95. None of the plant is made in India, except joists, pulleys and small replacement jobs.

#### VIII. CAPITAL ACCOUNT.

96. At the end of 1923, Block Account stood as follows:—

	Rs.
Land . . . . .	1,66,339
Buildings . . . . .	3,77,867
Machinery . . . . .	7,53,877
Siding . . . . .	337

97. The amounts written off for depreciation during the life of the Company are as follows:—

	Rs.
Buildings . . . . .	12,91,348
Machinery . . . . .	20,33,700

in addition Rs. 3,00,000 remain in hand to cover the completion of improvements and extensions.

98. The sufficiency of the Depreciation Account was only achieved by a reduction in the capital of the Company, whereby the capital was reduced from Rs. 12,00,000 to Rs. 3,00,000 in 1903-04.

99. We estimate the present day cost of a mill similar to that at Rangeegunge would be:—

	Rs.
(a) Buildings . . . . .	15,00,000
(b) Plant and machinery . . . . .	45,00,000

The cost of the present mill has been as follows :—

	Rs.
(a) Buildings . . . . .	18,89,214
(b) Plant and machinery . . . . .	27,64,611

A new mill should be cheaper in operation than the mill at Raneegunge, but with similar material, it is doubtful whether the difference would be very appreciable.

100. The sums spent on plant and machinery in the following years were :—

1917.

Power Plant . . . . . Rs. 1,76,720 @ 1—4  $\frac{1}{2}$ d. exchange.

1918.

Power Plant . . . . . Rs. 2,30,793 @ 1—4  $\frac{1}{2}$ d. do.

1919.

Refiners . . . . .  
Machine Improvements . . . . . } Rs. 96,850 @ 1—7  $\frac{1}{2}$ d. do.

1920.

Steam plant . . . . . Rs. 61,463 @ 1/10d. do.

1921.

Rag Boilers, Evaporating . . . . .  
Plant, Machine and Improvements . . . . .  
Beaters, Grass Boilers, Paper Cutters . . . . . } Rs. 4,92,991 @ 1—3 9/16d to 1/5d exchange.

1922.

Machine Improvements . . . . . Rs. 2,50,216 @ 1—3 15/16d. exchange

1923.

Reeling Machine and Steam Plant  
Improvements . . . . . Rs. 73,668 @ 1—4 1/3d. exchange.

1924.

Pumps, Strainers, etc. . . . . Rs. 13,567 @ 1/5d. exchange.

101. The authorised capital of the Company is Rs. 14,00,000 of which Rs. 8,88,225 have been issued in Ordinary Shares of Rs. 25 each and Rs. 2,00,000 in Preference Shares of Rs. 50 each.

102. Preference Shares carry 7 per cent. interest and have preferential claim on capital. Dividends have been paid up to date since the reduction of capital and the shares were floated when the Company was floated.

103. Nil.

104.

	Dividends distributed on ordinary share capital.			Dividends distributed on preference share capital.	
	Rs.	A. P.	Per cent.	Rs.	Per cent.
1904 . . . . .	Nil.			13,965	7
1905 . . . . .	Nil.			13,965	7
1906 (half-year) . . . . .	8,000	0 0	8	13,965	7
1907 . . . . .	25,333	5 4	8	14,000	7
1908 . . . . .	32,000	0 0	8	14,000	7
1909 . . . . .	24,000	0 0	6	14,000	7
1910 . . . . .	24,000	0 0	6	14,000	7
1911 . . . . .	24,000	0 0	6	14,000	7
1912 . . . . .	24,000	0 0	6	14,000	7
1913 . . . . .	24,000	0 0	6	14,000	7
1914 . . . . .	24,000	0 0	6	14,000	7
1915 . . . . .	32,000	0 0	8	14,000	7
1916 . . . . .	40,000	0 0	10	14,000	7
1917 . . . . .	2,60,000	0 0	52	14,000	7
1918 . . . . .	3,12,000	0 0	52	14,000	7
1919 . . . . .	3,12,000	0 0	52	14,000	7
1920 . . . . .	3,12,000	0 0	52	14,000	7
1921 . . . . .	2,25,000	0 0	25	14,000	7
1922 . . . . .	Nil.			14,000	7
1923 . . . . .	Nil.			14,000	7

105. The following is the average rate of dividend paid on the Ordinary Shares during 1904 to 1923 inclusive 15½ per cent.

1904-1916 . . . . .	} 5½ per cent.
1922-1923 . . . . .	

106. The Company has a Debenture Loan of Rs. 7,00,000 carrying 6 per cent. interest, repayable in 1928, against which a Debenture Redemption Fund amounts to Rs. 3,57,164-11-2 and Rs. 1,92,800 has not been issued, but has been lodged as security for overdraft with the Managing Agents.

107. The general reserves of the Company amount to Rs. 3,00,000 and has been set aside from profits.

108. No further capital is required.

## IX. COST OF PRODUCTION.

### A. Works Costs.

109. The process from our raw materials to unbleached pulp, from unbleached pulp to bleached pulp and from bleached pulp to paper are so closely allied that separate accounts are not kept with the Company and we have, therefore, only been able to fill in Forms 1 and 4 in regard to paper-making. Estimated costs of the various operations could be supplied but we thought it preferable to adhere to actual figures. The difference between bleached and unbleached pulp depends on the class of paper made, but generally it may be taken that to bleach a ton of unbleached grass pulp would cost Rs. 55 at present rates. Form 5 has not been filled in as the Company does not undertake the manufacture of any chemicals and the various recovery processes are included in the cost of auxiliary raw materials.

110. The Works cost in 1923 was increased considerably by the low output arising generally from labour working slow; it is this factor which gave us an outturn of 547 tons per month instead of 700 tons. The increased cost per ton of paper we estimate at Rs. 49 standing charges being practically the same for either output.

111. The outturn taken as a basis for calculating our costs in answering this question was 7,680 tons and the following estimated costs of making pulp and paper in a normal year are amended to meet the explanations given at the oral examination.

	To unbleached pulp.	To paper.	Total.
	Rs. A. P.	Rs. A. P.	Rs. A. P.
Raw materials . . . .	212 8 0	37 8 0	250 0 0
Purchased pulp . . . .	50 0 0	...	50 0 0
Mill labour . . . .	52 0 0	12 0 0	64 0 0
Power and fuel . . . .	23 8 0	21 8 0	45 0 0
Repairs and maintenance of build- ings and machinery . . .	15 0 0	16 0 0	31 0 0
General services, etc. . .	...	...	13 0 0
Taxes and insurance . . .	...	...	6 0 0
All other items, Head Office, interest, etc. . . .	...	...	21 0 0
<b>TOTAL</b> . . . .	...	...	480 0 0
<b>Works Cost</b> . . . .	...	...	459 0 0

112. No, the mill does not have any detailed system of costing.

113. We regret we cannot give these details, but our Home correspondents advise us that esparto grass mills, selling their products at 3½ per lb., have been working without profit, or at a loss.

#### *B. Overhead Charges.*

##### *Depreciation.*

114. 2½ per cent. is allowed by the income-tax authorities on buildings and 7½ per cent. on machinery; these figures seem to operate equitably.

115. The sum required for depreciation at income-tax rates amounts to Rs. 41,730 on buildings and Rs. 2,00,000 on machinery, these assets being valued at cost. Taking the assets at depreciated value, the sums required are Rs. 9,446 and Rs. 56,503, respectively.

116. The depreciation required at present rates on the value of a mill erected to-day on the scale of the Rancogunge mill would be Rs. 37,500 for buildings and Rs. 3,37,500 for machinery.

117. The charge per ton for depreciation on the mill at primo cost is Rs. 38-3-9 on present outturn and Rs. 29-14-2 on capacity outturn. This calculation on depreciated value of block would mean a charge of Rs. 10-0-9 per ton on present outturn and Rs. 7-13-7 on capacity outturn. On a new mill, such as Rancogunge, with the present outturn, Rs. 57-1-11 would be required for depreciation but on full capacity, this would be reduced to Rs. 44-10-9.

#### *II.—Working Capital.*

118. At present the working capital required is about Rs. 15,00,000. The increased outturn to the full capacity of the mill should not necessitate more than another Rs. 2,00,000 for the purchase of raw material, etc.

119. The Company has had to borrow in order to provide itself with working capital.

120. On the 1st of February 1923 the amount borrowed was Rs. 3,99,547 at 1 per cent. above bank rate.

121. The cost of one month's output is approximately Rs. 2,78,000 or 18 per cent. of the working capital.

122. The average value of finished stocks is Rs. 4,50,000 and the majority of the output is converted into cash within 70 days.

123. The value of coal, stores and raw material stocks varies from Rs. 7,50,000 to Rs. 11,00,000, the lower figures being reached at the commencement of the grass collecting season.

### III.—Agents' Commission and Head Office Expenses.

124. The Head Office of the Company is at 103, Clive Street, Calcutta, where Balmer, Lawrie & Co., Ltd., are the Managing Agents.

125. The annual amount of Head Office expenses is Rs. 89,658 for 1923 and the Managing Agents' Commission is 15 per cent., this being 5 per cent. higher than normal owing to the Managing Agents having saved the Company from liquidation by the provision of capital when none was obtainable in the open market.

126. The Agents' commission is determined on the nett profits before deduction of debenture interest or depreciation.

127. The cost per ton of paper of Head Office expenses is Rs. 13-10-7 but the Agents' commission depends upon the profits, not on the turnover. These figures are on the present output, but on the full capacity of the mill, they would be Rs. 10-2-8 per ton.

### X. MANUFACTURERS' PROFITS.

128. 9 per cent. to 10 per cent., if the industry is established and protected.

129. 7 per cent. debentures and 8 per cent. preference shares might attract capital under the conditions named, but it is doubtful.

130. 12 per cent. to 14 per cent.

#### *Incidence per ton of paper.*

131.

1923.	Fair return on Ordinary shares.	Dividend on preference shares.	Interest on Debentures.
	Rs.	Rs.	Rs.
Present Output . . . . .	13-70	2-13	4-64
Mill capacity . . . . .	10-72	1-67	3-63

### XI. CLAIM FOR PROTECTION.

132. We claim that an abundant supply of raw materials, sufficiently cheap power, labour and market conditions are all favourable to the establishment of the paper industry in this country. In reply to Question 85 we

set forth the difficulties which the industry meets, but in our experience, none of these difficulties prohibit the establishment of a healthy industry provided the Indian market is protected from dumping by foreign manufacturers.

### B.

Without protection we do not think the paper industry will develop to any appreciable extent, for market conditions are too uncertain owing to free imports of low-priced papers to permit confidence in any fair return for capital invested.

It is difficult to answer this question. A period of protection in India may lead to the development of some other dumping ground for surplus production from foreign mills passing through periods of restricted local consumption. A period of protection for the Indian Paper Industry should enable it to develop local supplies in all directions, which may enable it to face fair foreign competition successfully.

133. (a) We are not sure that large scale production would be reflected in any increase in economic production, except in the direction of a larger paper industry being likely to attract subsidiary industries in order to supply the varied needs of the paper factories, and these needs, if met locally, would likely be more economical than the present method of indenting abroad.

(b) We do not think the supply of all India's requirements from Indian manufacturers is a practical proposition. In time if the present industry is brought into a healthy condition, the tendency will be to try and meet all India's requirements, that can be met, from local supplies of raw materials, but for many years we do not anticipate seeing any great difficulty in meeting India's requirements of special classes of paper.

134. We consider the period of stress during 1914 to 1918 proved conclusively, not only the desirability but the necessity of paper mills in this country.

135. The paper industry seems to be peculiarly suitable for Indian economic conditions, in so far that the large proportion of labour used in its production, from the collection of raw materials to the handling of the finished product, requires no skill, while the skilled labourers require no exceptional qualification in the way of physique. These conditions, together with the fact that India can supply the large majority of the needs of a paper industry, affords strong points in its favour.

136. We consider protective duty should be imposed on all classes of paper. The high class papers can easily stand such protection as we ask for, and if the very low class papers are to be excluded from the tariff, the natural tendency will be to induce India to utilise a class of paper which cannot be made in the country. As far as we can see, 90 per cent. of India's requirements can be made locally when the industry has developed, and of the remaining 10 per cent., probably half only is of the cheap class of paper known as "News" made from free wood. At present this, in common with other classes of paper, pays a 15 per cent. revenue duty, and we believe a further 10 per cent., bringing it up to the 25 per cent. protective duty we ask may be placed on all imported papers, will inflict no undue burden on any interests. Should this belief not find support, we would strongly urge that any exceptions to the levy of protective duty on this class of paper, be made in the form of licenses to import. Exclusion from the tariff would lead to the import of "News" to take the place of other papers, which can be, and are being made, locally.



137. We do not anticipate having to ask for further protection than 25 per cent., but should the paper market be influenced to an abnormal degree by depreciated exchanges or other causes, we presume the Tariff Board will be in existence to receive representations on this score.

138. The protection received by the industry at present from the existing customs duties is 15 per cent. on paper and Rs. 35 may be taken as the average freight, insurance and landing charges on foreign paper. This is gross protection, however, from which, in order to find the net figure, have to be deducted the import duties we pay upon mill materials and the freight and handling charges on bringing our paper on to the market. In the case of Calcutta, the freight on paper amounts to Rs. 5-6-0 per ton; in Madras Rs. 50 and in Bombay Rs. 57.

139. Our reason for asking for 25 per cent. protection on schedule rates to be based on market rates in India is, that we have found by experience that the present levy of 15 per cent. is not sufficient to prohibit foreign mills from selling at or below cost. Our own working figures show to us that on working the mills at their full capacity, it is not a difficult thing to reduce the cost of paper by 10 per cent. and we believe 25 per cent. is the minimum which will make foreign manufacturers look to other markets rather than sell their surplus production in India at or under cost. In asking for 25 per cent., we are hopeful of counteracting to some extent the advantages which many foreign mills hold by reason of ocean freights against the higher train freights of the local mills. In brief, we consider the 25 per cent. protection asked for by Indian mills is necessary to enable them to continue selling their paper at present prices, and we do not anticipate from the present condition of the paper market, that if the protection is granted, the extra 10 per cent. in Customs duty will have the effect of raising the price of paper, but that it will be reflected in the greater ease with which local mills will find buyers for their output, thus enabling them to reduce their cost of manufacture.

140. We trust our various replies have made it clear that the paper industry's petition for protection is based on the question of dumping, and consequently has nothing to do with the years it has been established.

141. We see no conflict between the claims for protection of paper and of pulp, although the latter is raw material to the former. We feel that our arguments in favour of protecting the paper industry would be considerably weakened, were we to object to the increase of duty on pulp. Protected paper and free pulp would likely lead to the establishment of a paper industry based on foreign materials, and this is not in the interests of the country. We are of opinion, however, that there is a vital difference between the protection asked by the two industries, for whereas the paper industry has a large Indian market to supply, we are very doubtful if the pulp industry can depend on other than export demand. If bamboo pulp is proved a better proposition for paper-making than pulp from the raw materials at present in use, it is not unlikely that the paper mills will make their own pulp from bamboo as they at present make it from grass. We, therefore, look upon the protection asked for by the pulp industry as chiefly directed to the building up of an export trade. Hitherto the production of bamboo pulp as a marketable commodity, has not been proved, and we are doubtful whether supplies of this material will be forthcoming for at least two years. Whilst, therefore, considering a protective duty against wood pulp a necessary corollary to the protection of paper, we would strongly urge that such duty may not come into effect for a period of two years, during which the paper mills may take steps to collect and handle local raw material, to take the place of imported pulp. With such concession, we believe, the paper industry will be in no way hurt by the introduction of a reasonable duty on wood pulp, for although for reasons given in our reply to Query No. 34, it may be necessary for many years to come to import a certain quantity of wood pulp, it will be in diminishing quantities, and thus add no insuperable burden to the costs of producing paper.

## FORM I.

Statement showing the total expenditure incurred on the production of paper during certain years.

	SEE QUESTION 109			1923
	1914	1921	1922	
	Rs.	Rs.	Rs.	Rs.
1. Primary Raw materials .	3,53,654	6,82,026	6,70,697	6,71,240
2. Purchased Pulp . .	3,03,479	13,90,654	8,57,266	6,55,758
3. Auxiliary Raw Materials .	3,21,478	7,27,779	7,75,865	7,36,000
4. Mill labour . . .	2,06,802	3,71,783	4,26,554	4,63,761
5. Power and Fuel . .	1,19,423	3,73,793	4,84,890	4,52,696
6. Ordinary current repairs & maintenance of buildings, plant and machinery.	1,11,313	3,08,376	3,05,263	2,78,991
7. General services, supervision, local office charges and packing.	46,562	62,249	60,403	83,824
8. Miscellaneous, e.g. rent, municipal taxes, insurance, etc.	16,032	75,433	69,911	66,354
9. Any other single item not enumerated above which amounts to 5% or more of the total expenditure.	..	..	..	..
TOTAL .	14,77,733	39,93,093	36,50,849	34,08,624
Total production of paper manufactured for the year .	6,068	5,982	6,208	6,656 tons.

## FORM IV.

*Statement showing the works cost per ton of finished paper.*

	See Question 109.			
	1914	1921	1922	1923
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
1. Manufactured bleached* pulp.	58 4 6	114 0 2	108 0 8	102 3 9
2. Purchased bleached pulp .	50 0 2	232 10 3	158 1 5	99 14 1
3. Auxiliary raw materials .	52 15 7	121 10 8	124 15 8	112 1 7
4. Mill labour . . . .	33 14 10	62 2 5	68 10 7	70 9 2
5. Power and Fuel . . .	19 10 11	62 7 0	78 1 0	68 15 3
6. Ordinary current repairs and maintenance of buildings, plant and Machinery.	18 5 5	51 8 10	49 2 10	42 7 1
7. General services, supervision, local office charges and packing.	7 10 10	10 6 6	9 11 7	12 12 11
8. Miscellaneous, e. g. rent, municipal taxes, insurance, etc.	2 10 4	12 9 9	11 4 3	10 1 9
9. Any other single item not enumerated above which amounts to 5% or more of the total expenditure.	..	..	..	..
	243 8 7	667 8 4	588 0 9	519 1 7
Credit for materials recorded (if any).	..	..	...	..
Total production of finished paper for the year.	6,068	5,982	6,209	6,565 tons.

\*This was subsequently corrected in oral evidence as "Primary raw materials."

*Statement II.—Supplementary information submitted by the Bengal Paper Mill Company, dated 21st July 1924.*

We duly received your letter of the 9th instant with enclos<sup>ure</sup>, which we return corrected herewith.

We also enclose answers to the supplementary questions arising out of the oral examination, which we hope will be found to give the information required. We may mention that we have original invoices substantiating the prices for foreign papers referred to in these further replies.

In addition to the questions dealt with, Mr. Ginwala asked for comparisons in cost through working pulp and paper processes under one roof or working the pulp at the scene of raw materials and the paper elsewhere. We regret that we have no particulars on this matter and we have therefore omitted referring to it. We understand, however, other Paper Companies are giving the information required, which we believe will cover the necessary ground.

*Reply to supplementary questions arising out of oral examination.*

(i) Arising out of No. 7, I was asked to compare the freight payable at Mills situated in the grass fields and Mills situated in the coal fields.

<i>Mills situated at Raneegunge :—</i>	Rs.	A.	P.
1½ tons of grass from Ramnagar at Rs. 26-4-9 . . . . .	39	7	0
1½ tons of grass from Coilkera at Rs. 19-2 . . . . .	28	11	0
6 tons of coal from Jherria/Raniganj at Rs. 3-12 . . . . .	22	8	0
<b>TOTAL</b>	<b>90</b>	<b>10</b>	<b>0</b>

Assuming that all coal be drawn from the adjacent colliery, the freight would be reduced by Rs. 19-8-0, i.e. the total would be Rs. 71-2-0.

<i>Mills situated at Ramnagar :—</i>	Rs.	A.	P.
3 tons of grass . . . . .			<i>Nil.</i>
6 tons of coal from Jherria/Raniganj at Rs. 11-8 . . . . .	69	0	0
<i>plus extra freight on say :—</i>			
¾ ton chemicals and materials per ton of paper at Rs. 16 . . . . .	12	0	0
<b>TOTAL</b>	<b>81</b>	<b>0</b>	<b>0</b>

(ii) Q. What is the total rent and royalty on grass and how does the freight on esparto grass from Spain to Glasgow compare with the freight on sabai grass from the fields to Raneegunge?

A. In 1923 the following sums were paid in rent and royalty :—

<i>Sabai Grass.</i>	Rs.
* Ramnagar . . . . .	15,000
<i>Nagpur—</i>	
Singbhum and Porahat . . . . .	23,332
Bonai . . . . .	1,000
Gangpur . . . . .	1,000
Nagra . . . . .	5,500
Kali-Hati . . . . .	3,500
(Forest not worked)	
<b>TOTAL</b>	<b>79,332</b>

\* Paid to Contractor who developed the field.

From these fields we collected 131,835 mds. and in 1914 we collected 113,092 mds. from the following fields :—

	Mds.
Nagpur . . . . .	99,286
Nepalgunge . . . . .	13,806
<b>TOTAL</b>	<b>113,092</b>

N.B.—In 1914 we worked other forests through Contractors, but have no record of rent paid.

The price of Spanish esparto c.i.f. United Kingdom is at present £6 10s. 0d. and is generally carried in chartered vessels on which the freight might be taken at 10s. to 12s. 6d. per ton.

(iii) Q. Give particulars of costs as called for in No. 20, for each field, for 1923-24.

A.

1923.

	Rs.	A.	P.
	Per ton.		
<i>Nagpur :—</i>			
Average price paid to Contractors . . . . .	26	2	6
Rent . . . . .	9	4	6
Railway freight . . . . .	9	0	0
Press and Godown Rents . . . . .	4	3	6
Management and Forest Establishment Charges . . . . .	7	9	6
<b>TOTAL</b>	<b>56</b>	<b>4</b>	<b>0</b>

The total grass collected was 81,670 mds. and the total available 135,000 mds.

	Rs.	A.	P.
	Per ton.		
<i>Ramnagar :—</i>			
Cutting . . . . .	11	13	0
Carting . . . . .	8	7	0
Baling . . . . .	2	3	6
Loading into Wagons . . . . .	0	5	1
Railway Freight . . . . .	13	13	1
Rent . . . . .	23	10	0
Establishment Expenses . . . . .	4	3	6
<b>TOTAL</b>	<b>64</b>	<b>12</b>	<b>2</b>

The total grass collected was 50,165 mds. and the total available 150,000 mds.

(iv) Q. Give actual quantities of grass collected from total areas in pre-war and post-war years.

	1913-14.	1922-23.	1923-24.
	Mds.	Mds.	Mds.
Nagpur . . . . .	99,286	99,400	81,670
Ramnagar . . . . .	not worked	82,637	50,165
Lansdowne . . . . .	..	46,555	Nil.
Sahebgunge . . . . .	50,293	19,851	..
Nepalgunge . . . . .	59,686	29,277	..
Pirpainti . . . . .	4,506	Nil.	..
Bariaurpur . . . . .	9,300	..	..
	<b>223,071</b>	<b>277,720</b>	<b>131,835</b>

In 1922-23 and 1923-24 further supplies could have been drawn from all these areas, had they been required.

Q. What is the value and charges on bleach, aluminiferous, China clay imported from England in 1914 ?

A.

Bleach.	Aluminiferous.	China clay.
(a) England.	England.	England.
(b) £5 per ton.	£2-10-0 per ton.	£1-10-0 per ton.
(c) Calcutta.	Calcutta.	Calcutta.
(d) £2 per ton.	£1 per ton.	£1-10-0 per ton.
(e) Rs. 4 per ton.	Rs. 2-8 per ton.	Rs. 2-8 per ton.
(f) Rs. 8 per ton.	Rs. 3 per ton.	Rs. 2-8 per ton.
(g) 5% on invoice value.	5% on invoice value.	5% on invoice value.

The latest price for lime is Rs. 15-10 per ton f.o.r. Katni, whence the freight is Rs. 16-13.

(v) Arising out of the employment of 14 Europeans at Raneegunge, unfavourable comparisons were made with Lucknow, where I was informed that Europeans are not used. My information, however, is that up to a short time back, the Lucknow Mills had 5 or 6 Europeans in its employ.

(vi) The total customs duties paid by us on auxiliary materials in 1923 were as follows :—

	Rs.	A.	P.
Bleaching powder . . . . .	24,539	14	0
China clay . . . . .	6,750	0	0

These commodities may be expected to be our chief importations of auxiliary raw materials in future, and exemption from duty would give a relief of approximately Rs. 5 a ton of paper made, or an advantage of 1 per cent. on the average value of our paper.

(vii) The outturn taken as a basis for calculating our costs in answering this question was 7,680 tons, and the following estimated costs of making pulp and paper in a normal year are amended to meet the explanations given at the oral examination.

	To un-bleached pulp.	To paper.	Total.
Coal . . . . .	23 0 0	21 0 0	45 0 0
Raw materials . . . . .	162 8 0	37 8 0	200 0 0
Purchased pulp . . . . .	50 0 0	..	50 0 0
Mill labour . . . . .	52 0 0	12 0 0	64 0 0
Power and fuel . . . . .	23 8 0	21 8 0	45 0 0
Repairs and maintenance of Buildings and Machinery.	15 0 0	16 0 0	31 0 0
General Services, etc. . . . .	..	..	13 0 0
Taxes and insurance . . . . .	..	..	6 0 0
<b>TOTAL</b> . . . . .			<b>459 0 0</b>

#### Works Cost.

All other items, Head Office, interest, etc . . . . .	21 0 0
<b>TOTAL</b> . . . . .	<b>480 0 0</b>

In reply to remarks by the President regarding the effect of the suggested protective duty, we take the following three classes of paper: White Printing, Badami and Cream Laid. The estimated costs of chemicals and materials for these papers on April 1923 working are respectively: Rs. 350; Rs. 175; Rs. 380 per ton of paper. To these have to be added the standing charges set forth in Answer No. 111, amounting to Rs. 180 a ton. This shows a total all-in cost for White Printing of Rs. 530 per ton, which almost exactly coincides with the English valuation of Rs. 525 of this paper based on current rates at Home. German Mills, however, are selling in Calcutta at Rs. 525 per ton whereas we have to try and sell at Rs. 572 per ton net, i.e. Rs. 665 less 14 per cent. discount, in order to have Rs. 47 to cover depreciation and dividends.

In the same manner, Cream Laid, with an all-in cost of Rs. 560 is valued an exactly the same figure on the English market. Austrian papers are sold in Calcutta at this figure or Rs. 560 and we try to sell at Rs. 700 less 14 per cent. discount or Rs. 602, in order to have Rs. 42 to cover depreciation and profit.

Badami paper with an all-in cost of Rs. 355 is valued on the English market at Rs. 420 and we try to sell at Rs. 452 net, i.e. Rs. 525 less 14 per cent. It is this paper which might be replaced to some extent by Newsprint, quoted to-day in England at Rs. 350 per ton and offering in Calcutta from Germany at Rs. 345.

25 per cent. duty instead of 15% on foreign papers would mean that German White Printing could not be placed on the market under Rs. 572 on the present basis of return to the Manufacturer and Importer, whereas Cream Laid would similarly cost Rs. 610.

Such protection would therefore facilitate the sale of our paper at present prices, and assuming a gradual improvement in efficiency of 10 per cent. on our all-in costs with the increase of output, we should be able to sell White Printing at Rs. 572 against an all-in cost of Rs. 473, whilst Cream Laid would be sold at Rs. 602 against an all-in cost of Rs. 504 thus making a reasonable allowance for depreciation and profit.

25 per cent. on foreign Newsprint would only bring the selling price up to Rs. 350 or Rs. 5 below the cost of our Badami, and although this competition might cut into our Badami trade, the indisputably better qualities of the Badami should better enable us to sell our output.

It will be noted that all comparative foreign prices are taken at 1s. 4d. exchange, and it may be mentioned that before the War when we were selling Badami at a net price after allowing for discounts of Rs. 233, we were selling at a loss, due in a degree to the pressure of competition from Newsprint, at that time selling at Rs. 210.

A further point on which I was questioned was as to whether it was possible to show the disadvantages Indian paper suffers in terms of rupees, annas and pies. During 1923 the Company paid Rs. 44,215-9-0 as duty on materials, stores, etc., equal to Rs. 7 per ton of paper made. It was shown in the oral evidence that the Mill suffered in comparison with foreign Mills from increased cost of expert supervision to the extent of 2-5ths of Rs. 1,88,013 or Rs. 11 a ton. To this must be added the decreased efficiency of Indian compared with European labour, and assuming the output of 540 tons monthly with Indian labour, would be 640 tons with European labour, the decrease in efficiency might be taken at 15 per cent. of the standing charges of Rs. 180 or Rs. 27 per ton.

Thus the disadvantages on the question of duty, supervision and efficiency amount to Rs. 45 a ton. This sum added to the c.i.f. costs of foreign paper would show a c.i.f. cost, excluding duty, on foreign paper at Rs. 503 a ton for White Printing and Rs. 531 a ton for Cream Laid against Indian costs of Rs. 525 and Rs. 560 respectively.

Allowing for an anticipated future 10 per cent. reduction in costs, our papers would then compare with foreign costs as follows :—

	Foreign.	
	Rs.	Rs.
White Printing . . . . .	473	503
Cream Wove . . . . .	504	531

Thus our present total disadvantages are :—

	White Prtg. Cream Wove.	
Lack of expected efficiency in cost of chemicals and materials.	52·8	56·
Duty . . . . .	7·	7·
Expert supervision . . . . .	11·	11·
Decreased efficiency Indian labour . . . . .	27·	27·
	<hr/>	<hr/>
	97·8	101.
While 25 per cent. on foreign papers would be .	114·	121·

From these figures it appears that a 25 per cent. protective duty should enable Indian Mills to meet present foreign competition, and should just about counter-balance the disadvantages of the Indian Manufacturer. Whether foreign papers can be still further reduced in price is a point on which we cannot offer evidence, but in view of the fact that English Mills are generally having difficulty in covering expenses and that Continental paper is being imported at lower than English prices, it seems probable that foreign papers are unlikely to sell at very much lower prices than at present.

(viii) *Messrs. John Dickinson & Co.*—This Company's representation to the Board came to our hands, as it had been sent to all their Branches with the purpose set forth in the following paragraph from their covering letter :—

"We believe, as you will find, that this covers the ground fairly extensively, and hope that you will be able to make use of the thesis in connection with any paper agitation or protest through the Indian dealers, which you may be able to arrange."

We may mention that their representation and covering letter has been fairly widely circulated and the above extract affords explanation for their statements, several of which are so inaccurate that we avail ourselves of your permission to comment on them.

In paragraph 4 Messrs. John Dickinson claim that a protective duty would penalise areas situated remote from the place of manufacture, but in paragraph 14 they state that owing to cheap sales by Indian Mills "in consequence practically no competitive imported paper is found in these markets." In our experience, neither paragraph is correct.

In paragraph 6 it is suggested that the cost of paper places it beyond the pocket of 90 per cent. of the people whose consumption, based on three hundred millions, is considered to be half a pound per head. How far the consumption is affected by cost, we need not labour, for conditions in various countries, social, hygienic and educational, make a comparison valueless.

In so far as No. 7 is concerned, we emphatically protest against the inference that the difference in the cost of indigenous and Continental paper is such as to effect the bankruptcy of newspapers, whose paper bills must be compared to their total revenues, it being a generally accepted fact that many papers have sold their issues profitably at a lower cost than the cost of the paper alone. Similarly the duty on paper is a very small item in the cost of education and not such as to press heavily on the population.



Paragraph 8 of Messrs. John Dickinson's letter contains what we can only term a deliberate mis-statement, for they are perfectly well aware that Indian Mills have for many years supplied the major requirements of the Government of India.

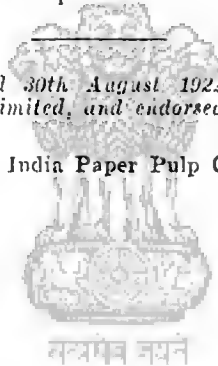
Paragraphs 13 and 15. These comments are characterised by an ignorance which in view of the figures laid before you as to our Capital, etc., require no traversing from us, but we would wish to emphasise particularly the following remark in 15:—"Such enterprises...as are run in the interests of the owners, are showing excellent results." This paragraph although we doubt if Messrs. John Dickinson have any substantial information to base their opinion on, is an interesting indication of the possibilities of paper making in this country.

With reference to the concluding remarks from paragraph 16 onwards, our tendered evidence has dealt with, and we only have to add that in spite of the stated fact "that the general situation in the paper trade universally is most precarious and in the last 12 months about half a dozen British Concerns have had to close down," yet Messrs. John Dickinson and other English Exporters have been dealing in Continental paper at lower rates than those obtainable from English Mills.

It is against competition such as is indicated in Messrs. John Dickinson's concluding paragraph, assisted by a collapse of foreign exchanges, that we ask for protection of an indigenous industry supplying 35 per cent. of the country's requirements, with possibilities of great expansion.

*Statement III.—Note, dated 30th August 1924, submitted by the India Paper Pulp Company, Limited, and endorsed by the Bengal Paper Mill Company.*

. See statement VII of the India Paper Pulp Company, Limited.



## THE BENGAL PAPER MILL CO., LTD.

B.—ORAL.

### Evidence of Mr. H. W. CARR recorded at Simla on 3rd July 1924.

*President.*—On page 1 of your representation you say that the full capacity of the Mill is about 700 tons per mensem: that comes to about 8,400 tons per annum.

*Mr. Carr.*—Yes.

*President.*—But I see the largest outturn you had for any one year was 6,600 tons.

*Mr. Carr.*—We have started a fourth machine since then. We bought the Gwalior Mill but could not run it at a profit owing to transport difficulties, and so removed the whole plant, with the Maharaja's approval, down to Ranigunge.

*President.*—When was this?

*Mr. Carr.*—End of 1922 we got it running.

*President.*—What was the full capacity of your plant at Ranigunge before that?

*Mr. Carr.*—About 7,000 tons.

*President.*—In answer to question 7 you say that the most important factors in selecting a site for a paper mill are water, coal and raw materials. Which is the most important?

*Mr. Carr.*—Water is the essential thing: then comes coal.

*President.*—I can understand that water is essential for it would be very expensive to bring water from several miles away. But what about coal? You use six tons of coal for a ton of paper as against three tons of raw materials. So the transport of coal must be a very important matter.

*Mr. Carr.*—Yes.

*President.*—Then it is of advantage to a paper mill to be near its coal? On the whole, you consider that you are favourably situated at Ranigunge?

*Mr. Carr.*—Yes, except for supervision.

*President.*—You are nearer your coal and raw materials than the Calcutta firms, but as against that you have got the freight on the finished paper to the Calcutta market?

*Mr. Carr.*—Yes.

*President.*—But it must be less than either the freight on the coal or the freight on the raw materials?

*Mr. Carr.*—Yes.

*President.*—Coming now to question 8, you have said in the letter forwarding your representation that you would like the answer to be treated as confidential. The information does not appear to be of any great importance.

*Mr. Carr.*—It might be useful for competitors to find out what paper we are going to make.

*Mr. Ginnala.*—They can always find out what paper you are making, but they may not find out the exact quantity you are making of each kind.

*President.*—I do not know whether we really care whether these percentages are published or not for it is only a subsidiary piece of information. Still, I should doubt myself whether it is worth while treating it as confidential.

*Mr. Carr.*—Big users may be influenced by the fact that this company manufactures only 34 per cent. of printings, whereas another mill makes 60 per cent. I prefer to treat it confidential, but I am not very strong on it. On the whole, if you prefer, I withdraw the 'confidential' there.

*President.*—I think the most important thing is what are the kinds of paper in which the Indian manufacturer has really an advantage. The second point is what are the kinds of paper in which he is so much at a disadvantage that he is not likely to make them.

*Mr. Carr.*—I am answering the latter point first. We are never likely to make newsprint. It is practically entirely made from mechanical wood pulp.

*Mr. Ginwala.*—Do you mean your factory or India as a whole?

*Mr. Carr.*—India as a whole. I do not see when Indian companies are going to make mechanical wood pulp.

*Mr. Ginwala.*—But the chemical pulp may become nearly as cheap?

*Mr. Carr.*—Experience is against that.

*President.*—Subject to the possibility of bamboo pulp being usable, you do not see any prospect of newsprint paper being made in India?

*Mr. Carr.*—No.

*President.*—Naturally we shall ask Messrs. Andrew Yule & Co., when they come, about the bamboo pulp. Are there any other kinds of paper of some importance which are not likely to be made in India? What I am thinking of is the more expensive kinds.

*Mr. Carr.*—Very high class varieties we cannot make here in India.

*President.*—Things like papers made from linen rags?

*Mr. Carr.*—No. We can make under present conditions a good printing paper which escapes competition of the cheapest Continental paper and in that we can compete against foreign manufacturers on a fair basis.

*President.*—Are there any of these papers that you have enumerated in which the Indian demand is supplied practically entirely from India,—where the imported paper hardly comes in?

*Mr. Carr.*—*Badami* is almost entirely Indian.

*President.*—In all the rest you are in competition with the foreign manufacturers?

*Mr. Carr.*—There is also the unbleached—the old Government war printing—where there is no competition.

*President.*—Do you supply “unbleached” to Government only, or is there any general sale for that kind of paper?

*Mr. Carr.*—No.

*President.*—The importance of this question lies on the fact that these two kinds, *badami* and unbleached, come to nearly half of your output.

*Mr. Carr.*—Yes.

*President.*—It is an important fact that in respect of half of your output you are not subject to foreign competition.

*Mr. Carr.*—Yes.

*President.*—And, therefore, I take it that the price in India is more or less governed by internal competition?

*Mr. Carr.*—Yes, to some extent because these qualities are not in direct competition with foreign paper.

*President.*—*Badami* paper and unbleached between them are 45 per cent. of your output, and the price of the foreign paper does not come in, so presumably it is governed by internal competition.

*Mr. Carr.*—The question of substitution then comes in. Anybody using *badami*, for instance, in the bazar would use any cheap foreign paper.

*President.*—Then in that case what kind of foreign paper would be substituted for *badami* or unbleached?

*Mr. Carr.*—Any cheap whites.

*President.*—How would these cheap whites that you are referring to compare in price with *badamis* or unbleached? Are there cheap white papers which are imported at the same price as you sell your *badami* or unbleached?

*Mr. Carr.*—It is pretty near that. They class it second class printing.

*President.*—Would not the cheap brown paper compete for wrapping purposes?

*Mr. Carr.*—Yes.

*President.*—So that these kinds of paper are subject to competition though not with papers of exactly the same kind?

*Mr. Carr.*—Yes.

*President.*—In answer to question 10 the information you give is in practice the Indian paper manufacturer finds that he is compelled to supply a considerable variety of different kinds of paper. Could you explain to us how that arises? Suppose you ceased to manufacture certain kinds of paper, would that involve you in difficulty?

*Mr. Carr.*—Under normal conditions—I do not call them normal at present—a man who is buying white paper will sometimes want some of our cheap badami with it, and he won't place the order with the firm for the indigenous whites without the badami.

*Mr. Ginwala.*—What is it due to?

*Mr. Carr.*—He likes the badami, and before the war we were supplying badami at cost or a little below cost. Then again competition was keen, and we have got to meet all his requirements. It is much the same way with Government. We take anything from Government rather than let it go Home. At the present moment we are taking losses on some of our paper rather than allow orders to go Home, because they are practically essential for our mills.

*President.*—The position simply is that, in order to meet the wishes of your customers, you have got to be able to supply a large variety of different papers?

*Mr. Carr.*—Yes.

*President.*—It stands to reason that that must tend to raise your costs.

*Mr. Ginwala.*—Who is this Indian Director?

*Mr. Carr.*—Rai Sahib Ishan Chandra Ghose.

*Mr. Ginwala.*—Is he a business man?

*Mr. Carr.*—He has not had a business career. He is on the Board of the "Equitable" Coal Company, and he is on several commercial undertakings now. He was the head of one of the colleges and he has been a shareholder for many years.

*Mr. Ginwala.*—As regards your answer to Question 7 is it not considered necessary for paper manufacture that the site should be in close proximity to the raw materials?

*Mr. Carr.*—The nearer the better.

*Mr. Ginwala.*—The tendency now is, so far as the manufacture of pulp is concerned, to have the pulp factory in very close proximity to the primary raw materials.

*Mr. Carr.*—Water carriage gives more cheaply the same advantage as would have in railway carriage.

*Mr. Ginwala.*—In your case that does not hold good?

*Mr. Carr.*—In our case for many years our big field of grass was Chota Nagpur which means only a small freight.

*Mr. Ginwala.*—That is pretty nearly exhausted?

*Mr. Carr.*—From the labour point of view difficulties have increased but not from less grass growing on it.

*Mr. Ginwala.*—You do not wish to say, that it is exhausted, but it has become unremunerative. My point is that, as you are situated just now, you cannot say you are in close proximity to your primary raw materials.

*Mr. Carr.*—I think we are. All along Bengal Nagpur Railway we get our grass. The Mill is 80 to 100 miles from Chakradharpur.

*Mr. Ginwala.*—So that you think that, so far as you are concerned, you are favourably situated as regards your raw materials?

*Mr. Carr.*—We think we are not unfavourably situated.

*Mr. Ginwala.*—Of course with regard to coal you are quite all right.

*Mr. Carr.*—We have got it under the Mill but we do not use it from there: we buy it from the Ranigunge fields.

*Mr. Ginwala.*—You use six tons or more of coal for one ton of finished paper and you may be using only three tons of grass, but the freight on the three tons of grass may be a good deal more than on the 6 tons of coal.

*Mr. Carr.*—I think it is about the same. I have not got the figures here.

*President.*—Do you mean the same rate as per maund of grass as for coal?

*Mr. Carr.*—No. The cost of three tons of grass against 6 tons of coal. I will take a note of this and let you know\* 25 per cent. of our coal we bring over a tram line we have just put down from a colliery in the next field not 800 yards away. We hope to make that 25 to 60 per cent. to save in freight.

*Mr. Ginwala.*—It is very difficult really to estimate the relative advantages of being nearer to coal than to raw materials?

*Mr. Carr.*—Yes. It is all a matter of balancing. You may be very near to your raw materials at some site in the Ramnagar field where all our grass could be secured but you would be hopelessly away from the coal.

*Mr. Ginwala.*—Do not you think it is cheaper to take your coal than to take your raw materials over a long distance? In most countries where they manufacture pulp on a large scale they generally make the pulp near the raw materials.

*Mr. Carr.*—In Austria and Germany they use water power for any big pulp factory. In Norway they are raising steam by water power.

*Mr. Ginwala.*—Ordinarily speaking it is very difficult to use only electric power for manufacturing pulp? You will have to have some steam?

*Mr. Carr.*—There is only one mill I have heard of raising steam by electric power.

*Mr. Ginwala.*—You may have very big electrodes and things like that to boil your water and that is not a practical proposition in all cases, so that you have got to have some means of generating some steam and, as I pointed out to you, manufacturers must find it cheaper and convenient to take the coal to the raw materials.

*Mr. Carr.*—We will take the longest load of grass which is Ramnagar and our freight comes to approximately Rs. 0-8-6 a maund.

*Mr. Ginwala.*—It is nearly Rs. 14-8-0 a ton, taking 27 mds. for a ton.

*Mr. Carr.*—I will look that point again and send you information.\*

*Mr. Ginwala.*—It is rather important to find out whether you are conveniently situated with reference to your raw materials. Even if your coal is cheap, as I pointed out to you, still you may be at a great disadvantage in other respects and you have got to show that you are not.

*Mr. Carr.*—I am not sure if it is not in the answer here.

*Mr. Ginwala.*—In answer to Question 20 you say that the freight on grass is Rs. 9 per ton, and in answer to Question 57 you show the freight on Ranigunge coal as 13½ annas. That is Rs. 5 against Rs. 27 on grass.

*Mr. Carr.*—What you say does come up. We pay less on our coal and more on our grass. But, of course, if we were taking the coal to the grass, the figures would look very different. Here we draw 15 miles, there we will draw 80.

*Mr. Ginwala.*—Yours is a kind of raw material which you do not have in any one place. You must have a very large radius for your supply?

*Mr. Carr.*—Yes.

*Mr. Ginwala.*—In answer to Question 8 you also show a small percentage of Blottings, Antique and Colours. That cannot be economically sound. It is too small a proportion, is it not?

*Mr. Carr.*—Take the Blottings—it is only a small quantity but we may make only 3 makings per annum and thus each making may be profitable.

\* See Statement II (i).

*Mr. Ginnwala.*—What is the smallest quantity that you can manufacture at a time without losing much over it?

*Mr. Carr.*—It is difficult to say.

*Mr. Ginnwala.*—What is the smallest order that you can accept?

*Mr. Carr.*—About 3 tons.

*Mr. Kale.*—You say you follow the caustic soda process. What is the alternative process?

*Mr. Carr.*—I do not know of any other process on a big scale for grass.

*Mr. Kale.*—You think this is the most economical process?

*Mr. Carr.*—Yes.

## II. RAW MATERIALS.

### A.—Primary.

*President.*—I should like to begin by saying that I regard this as the most important section of the evidence, and I should like you to know from the start that you have not yet convinced me that all is for the best for your Company in the best of all possible worlds, as far as raw materials are concerned. I see that the quantity of grass you use is 6,500 tons annually, and of the other materials less than 5,000 tons.

*Mr. Carr.*—Yes.

*President.*—It is clear that grass is the most important. Has there been any change since the war in the proportions of the various materials you use?

*Mr. Carr.*—Since the war we have been using less grass.

*President.*—What are the reasons?

*Mr. Carr.*—I am not quite sure in which order to put them. Labour for collecting has been one of the most difficult, and shortage of railway wagons. Since the war we have been working up the grass supplies, and we have been using more in 1923 than in 1922 and we shall be using more in future; but the cost of labour has been rising tending to make it more expensive. The use of grass declined owing to the use of imported pulp being cheaper. That condition has been overtaken and we are using more grass. One reason why we were using less grass was that we were rebuilding the mill. We had to remove the whole of our grass boilers and the whole arrangement was upset for nearly 15 months.

*President.*—To what extent do you anticipate that this proportion will be altered?

*Mr. Carr.*—We expect to use about 3 lakhs of maunds of grass, that is about 12,000 tons.

*President.*—The point is this. At present you use 6,500 tons of grass to about 4,800 tons of other materials. When you get to what you regard as your normal condition of affairs the consumption of grass will go up and of the other materials will go down. What would be the amount of the transfer?

*Mr. Carr.*—The transfer would be about 1,300 tons from pulp to grass.

*President.*—At the end of your answer you say "The proportions of these materials have been largely dictated by the necessities of the situation rather than by selection." Could you amplify this statement and explain it to us?

*Mr. Carr.*—Industrial labour troubles have increased the necessity for pulp. We have had several partial strikes and we have had two or three full strikes, but in the partial strikes when grass boiling is shut down, if we have the bleached pulp, we can keep the mill running and thus save what is always a heavy loss—closing the mill. Then again, shipping, in a lesser degree, has not been so dependable as before the war, and the result was that we kept bleached pulp in reserve against delay in arrival of supplies that came out from Home. Again, after the war bleach went off in quality very much, and we often found that instead of using a 10 per cent. bleach to make white paper we had to use even 27 to 30 per cent. Then we sometimes ran short of bleach, and we would have been compelled to stop making white paper if we had no bleach to carry on, so that we have been using more bleached pulp than we would under normal conditions.

*President.*—Apart from these partial strikes to which you refer, has the use of imported pulp been rendered necessary by the conditions under which labour is now working as compared with the period before the war? During the last three or four years have the normal conditions under which labour has been working affected the use of imported pulp in any way?

*Mr. Carr.*—Labour has been working very much worse than before the war. They are now getting such high wages that they are not regular in attendance, and that again necessitates using some half prepared materials, such as pulp, instead of preparing it ourselves.

*President.*—Are things as bad as that? Has there been any improvement?

*Mr. Carr.*—I think they are improving a little.

*President.*—If it were a permanent state of affairs, it would be a permanent handicap to industries in India?

*Mr. Carr.*—I think all industries in India are suffering from the fact that wages have risen above the standard of living.

*President.*—I don't want to go any further on this point as it comes up later. Now, in answer to Questions 14 and 15 you give the quantities of raw materials required to make a ton of paper. I take it that, in each case, the assumption is that, if you made paper entirely out of grass, you would require 3 tons of grass, and similarly if you made paper entirely out of wood pulp, it would be 1·2 tons?

*Mr. Carr.*—That is our assumption in each case.

*Mr. Ginwala.*—What percentage do you get out of waste paper?

*Mr. Carr.*—The best sort of white we get up to 55 per cent.

*Mr. Ginwala.*—So that we have got to add that, have we not?

*Mr. Carr.*—We do not count waste paper as a raw material. It is a kind of filling. There is no strength in waste paper.

*President.*—How far are the papers you manufacture made of one kind of raw material only? Are the majority of them made out of a mixture of some kind?

*Mr. Carr.*—All are made of mixtures except *badami* and brown which are chiefly made out of jute.

*President.*—Are there any kinds of paper for which wood pulp is indispensable?

*Mr. Carr.*—Yes, there are one or two kinds.

*President.*—I mean kinds that you commonly make.

*Mr. Carr.*—Yes, they are high class typewriting and bank papers.

*President.*—And therefore for papers of that kind India is not so well equipped as other countries. What proportion of wood pulp is required in the case of these papers?

*Mr. Carr.*—I have not the knowledge to answer, but I think it is a large percentage.

*President.*—I mention that because my point here is that in respect of these kinds India seems to have no advantage.

*Mr. Carr.*—One or two kinds of paper we shall always require from Home.

*President.*—There is no possibility of India producing these?

*Mr. Carr.*—I don't think so.

*President.*—Can you tell us whether bamboo pulp would be equally suitable for these kinds of paper?

*Mr. Carr.*—I am afraid I don't know.

*President.*—What proportion of your grass do you draw from Chota Nagpur? There are two areas, one along the Bengal Nagpur Railway and the other along the East Indian through Gya on to Palamau. These are two areas which are within easy reach of your factory. What proportion of your grass do you get from these areas?

*Mr. Carr.*—125,000 maunds from there as opposed to 75,000 maunds from Rannagar, Nepal and other areas.

*President.*—What is the distance from the Mill to Ramnagar?

*Mr. Carr.*—About 700 miles.

*President.*—That is one of the points to which we drew your attention in the questionnaire. What it comes to is this. If you have to draw your supplies from 700 miles, it is difficult to see that in respect of your raw materials you have got any particular advantage?

*Mr. Carr.*—We hope to develop the nearer field and also we hope to get some from the Shahebgunga field.

*President.*—I regard this matter as very important, because it goes to the root of the whole case as far as making paper in India out of grass is concerned. What you have told us is that you ascribe the difficulty of getting adequate supplies from a reasonable distance, not to the disappearance of the grass, but to labour difficulties.

*Mr. Carr.*—Yes.

*President.*—The difficulty, I gather, of getting labour and also of getting labour cheap?

*Mr. Carr.*—Yes.

*President.*—This grass, I think, is to be found in thinly populated areas?

*Mr. Carr.*—I think so. I should rather say backward areas.

*President.*—If the population grows is it not likely that the grass may give way to cultivation? Does the grass grow on baddish land or does it grow on fairly good land?

*Mr. Carr.*—I don't know.

*President.*—Is it capable of cultivation?

*Mr. Carr.*—In Shahebgunga there is a fairly large population, but they do not seem to cultivate these areas.

*President.*—Well, it is for you to give the information. What occurred to me was this, that if I am right in suggesting that on the whole *Subai* grass grows in abundance in areas where the population is not dense, and is apt to disappear as population increases, then this labour difficulty must be a permanent one, because the moment the labour supplies arrive on the spot and settle down, then the grass tends to vanish.

*Mr. Carr.*—Take the big areas of Ramnagar, we have to take our labour there to cut it.

*President.*—I take it malaria and other fever prevent people from settling there?

*Mr. Carr.*—Yes.

*President.*—I know the Terai in Bihar, and certainly there, where people succeed in settling down, cultivation increases and the grass tends to give way. The point that really arises there is that there must always be labour difficulty in the circumstances.

*Mr. Carr.*—I have never heard any contractor complaining that the area is shrinking from that reason.

*President.*—You have not?

*Mr. Carr.*—No.

*President.*—Taking your area at what it was in 1910-14 are you getting proportionately the same quantity of grass from Chota Nagpur as at that time?

*Mr. Carr.*—No, it was decreasing, and that was the reason why we took it out of the hands of our contractors who were underpaying the coolies, and we put a supervisor in. Since then our supplies have been increasing though of course the cost has increased somewhat.

*President.*—Proportionately you are getting actually more than you were getting in 1910-14?

*Mr. Carr.*—Yes.

*President.*—After the labour difficulties experienced during the last four years in the collection of grass, have you succeeded in reducing them at all?



*Mr. Carr.*—Steady payment brings in labour. The big iron works have come in, Tatas' works have come in, but there is always a percentage who prefer to cut grass, and these are the people whom we get.

*President.*—These works must affect your labour supply, and that is a definite reason why the cost of labour should go up. It is indeed surprising that it has not gone up ever more.

*Mr. Carr.*—Quite so.

*President.*—You say in answer to Question 19 "Royalty varies from Rs. 24 per ton of grass or Rs. 72 per ton of paper." I think that the words "Rs. 72 per ton of paper" are parenthetical.

*Mr. Carr.*—They are.

*President.*—You have got to pay a much higher royalty for the Ramnagar grass?

*Mr. Carr.*—We can reduce it by half.

*President.*—I don't follow.

*Mr. Carr.*—We pay so much royalty for the forest.

*President.*—It is not then fixed according to the quantity of grass extracted, but is rather a rent?

*Mr. Carr.*—We have a ten years' lease.

*President.*—So that the incidence per ton of grass depends on the amount you collect?

*Mr. Carr.*—Yes.

*President.*—In the letter with which you sent your representation you asked that the answer to Question 20 might be treated as confidential. The cost of raw materials is a vital question in our enquiry, because there is the doubt which has been suggested—and the suggestion has got to be met—that in respect of raw materials the industry has no advantage in India. Unless we can go fully into the figures giving the cost of raw materials, it is difficult to see how we can proceed at all.

*Mr. Ginwala.*—There is one other point in connection with this. The Government experts, Messrs. Raitt and Pearson, have very little faith in *sabai* grass as a raw material for the manufacture of pulp on a very large scale.

*President.*—That is to say, on the basis of grass they do not think the industry can develop very much, if at all.

*Mr. Ginwala.*—They also say it is not easy for these manufacturers who use grass at present to adapt their machinery to bamboo. That being the position, if you are not able to show from your figures that your raw materials are not as expensive as those who favour bamboo are trying to make out, your case is weakened.

*Mr. Carr.*—Of course it is rather difficult. We have not looked at it from that point of view. We have always got the grass we want.

*President.*—You are asking for protection on the basis that the Indian manufacturer is to command the whole of the Indian market, or at any rate 90 per cent. of it. He has got to treble his outturn. India is now producing over 30,000 tons and eventually may produce 90,000 tons. On that basis it has got to be shown where the material for making that extra 60,000 ton is going to come from. The question is, can it come from grass?

*Mr. Carr.*—I should say no. India does not want 90,000 tons of grass paper.

*President.*—You have not attempted to show that paper can be manufactured from bamboo pulp. Let me put it this way. Do you think that the supply of grass required exists, and that it can be obtained at a reasonable cost if there is any considerable expansion of the production of paper made in India?

*Mr. Carr.*—I think so.

*President.*—It does not seem to be fully established by your answers.

*Mr. Ginwala.*—There is another point which I would like you to consider and that is this. Of course we are not in a position to say what the real

situation is at present, but there is a case made out against the manufacture of paper out of *sabai* grass which you are using. Apart from the question whether the industry can expand if it confined itself to the use of *sabai* grass as its primary raw material, there is the question whether the cost of the raw material, even if the manufacture was confined to its present limits, could not go up.

*Mr. Carr.*—Quite.

*Mr. Ginwala.*—There is a case put forward against you that the cost of the raw materials is constantly going up. Therefore, apart from the question of any expansion of the industry, it would not pay the paper manufacturer later on, or the country, to manufacture paper out of *sabai* grass. That is the case which you have got to meet and, unless you can show from your figures that that part of the case does not hold good against you, our difficulties and yours will become very much greater.

*Mr. Carr.*—Our request for protection is not designed to build up the industry.

*President.*—You have got to make out your case in accordance with the principles laid down by the Fiscal Commission. We are not at liberty to range over the whole fiscal field.

*Mr. Carr.*—The case which we have been putting to you is that the paper mills out here have proved an absolute necessity for India in times of stress and that we want to be protected from unfair competition, not fair competition.

*President.*—I don't think that you have made out a very strong case on the ground of national necessity. I think that the primary question we have got to consider is how far your industry satisfies the conditions laid down by the Fiscal Commission. I don't say that there is nothing to be said on national grounds, but personally I don't rate it very high.

*Mr. Carr.*—Not now, but during the war time it was estimated more highly.

*Mr. Ginwala.*—It is very important that the public, by which we mean the Government of India and the Legislative Assembly, should have the fullest possible information on this point, viz., the question of the raw materials, because a good deal has been stated in that respect against the paper industry at present. So far as the bamboo proposition is concerned, there is a good deal of official evidence—of course we do not know how far the commercial world accept it. Supposing the bamboo pulp people also insist upon keeping their information confidential and you do the same thing, and a member of the Legislative Assembly gets up and says "Here is the official estimate. The cost of producing bamboo pulp according to it is Rs. 165 a ton. Therefore the paper may cost about Rs. 300 a ton. Now is it that on these figures any protection is recommended?" If we recommend protection for this industry, you have got to show that these figures, which are public property, are not correct. You can only do that by showing what your figures are in actual experience. I leave it entirely to you. But I must point out to you that you will gravely prejudice your case, if you don't repudiate the case against you by publishing your figures.

*Mr. Carr.*—I did not realise that they would be of so much importance.

*Mr. Ginwala.*—We shall have to ask for a good many more figures. The first point we are trying to fix up is the question of publicity.

*President.*—The availability of your raw materials has been questioned. What it costs you to get these raw materials is an absolutely vital point.

*Mr. Carr.*—Yes, but if competitors who are buying rags find out what we are paying for them they are assisted considerably.

*President.*—Rags are, so to speak, secondary raw materials, secondary in the sense that they are not natural products except at a remove. If that would make any difference, we might say that grass is the material of which we are most anxious to ascertain the cost.

*Mr. Carr.*—In that case, I don't mind.

*President.*—As regards the other materials, we could say in our Report that from the figures given by the various firms the following figures may be taken as the cost at which they can be purchased, without giving details. But as regards grass we would like to give full details.

*Mr. Carr.*—I think that our grass cost is pretty well known. May I answer the question put to me just before about the availability of grass? I cannot of course answer this question with much exactitude. Our requirements are mentioned in this statement. I can only say that we have had no difficulty in getting our full requirements on the score of availability.

*President.*—One of the reasons why you used more pulp and less grass recently was just that difficulty.

*Mr. Carr.*—Not the availability.

*President.*—Availability includes the possibility of getting your labour cheap. If you cannot get people to bring it to you, you cannot say that it is available.

*Mr. Carr.*—On that basis, nobody has proved the availability of getting bamboo pulp.

*President.*—That point will come up in connection with bamboo also, but there is this difference. Surely as regards bamboo, the question still remains to be decided by practical experiments, but in the case of grass the experiment has been going on for nearly 40 years and it is time that some sort of a decision is arrived at.

*Mr. Carr.*—I can only say that we can get our requirements. We know where we can find all that we want. One year famine will come in; another year visitors will come out shooting. Anything like this upsets the whole arrangement.

*President.*—If the whole industry is liable to be hung up by the tours of distinguished cold-weather visitors, it must be in a somewhat precarious position.

*Mr. Carr.*—When any one goes out shooting in a forest, you know how it absolutely upsets the supply of labour.

*Mr. Ginnala.*—When we use the term "available" we don't mean "obtainable." What we mean is "commercially available."

*Mr. Carr.*—It is commercially available. We have no difficulty in getting it.

*Mr. Ginnala.*—What we want to know is whether it is capable of being used for commercial purposes. What is the good of a thing being available at £200 when you can only afford to pay £20. We are not concerned with the total quantity at a price that there is in India. What we are concerned with is how much of that you can commercially use without making it too expensive.

*Mr. Carr.*—We can commercially obtain it as far as we can foresee.

*President.*—In order to provide all your requirements, you have got to get your supplies from a place which is 700 miles away from your works.

*Mr. Carr.*—Yes, at the moment.

*President.*—In view of what we said at the beginning of the examination of the importance of being near the coal supply, it seems likely that, even if a new mill established in this country used water power, it would still require a certain amount of coal, would it not?

*Mr. Carr.*—You would have to use a certain amount of coal.

*President.*—Then it would have to be started somewhere within two or three hundred miles from the coalfields, that is to say it would have to go a pretty long way for its grass?

*Mr. Carr.*—Yes.

*President.*—That is where the difficulty comes in, so far as the expansion of the industry in respect of grass is concerned.

*Mr. Kale.*—You say that to-day, so far as you are concerned, you can buy your grass on a commercial basis, but the future expansion of the industry will lead other firms to extend their requirements. Suppose other firms cut

into your supplies, it may not be possible for you to buy your grass on a commercial basis?

*Mr. Carr.*—Every protection transfers competition from abroad to inside the country.

*Mr. Kale.*—Quite so. You admit that there will be internal competition?

*Mr. Carr.*—I do.

*Mr. Kale.*—That means that your prices will be raised and then it will no longer be possible for you to have your grass?

*Mr. Carr.*—Supplies will also increase as competition increases.

*Mr. Kale.*—How will the supply increase? On the other hand, the supply will become less when competing firms come into the field.

*Mr. Carr.*—I know of four or five forests which are not being cut which are much nearer Calcutta—say within 250 miles from Calcutta—but we have an expensive lease of Ramnagar and we simply cannot afford to neglect it. Otherwise we would be cutting our grass nearer.

*Mr. Kale.*—You will have to show that there are forests which have not been exploited, and that in that way potential supplies of grass can be increased. Can you demonstrate that your potential supplies are much nearer your factory and that they are likely to be developed, so that, in spite of the expansion of the other firms, you will have no difficulty in getting your supplies?

*Mr. Carr.*—I cannot prove that. Our belief in it is manifest in the fact that we have put in more machinery for using grass.

*Mr. Kale.*—It is not a question of mere faith. It is a question of a demonstrable proposition. Where are the forests which are not exploited where you can go?

*Mr. Carr.*—In Chota Nagpur and several Native States in Bihar and Orissa we have large quantities available. Of course we make our own arrangements, as far as we can, so that if anybody does come in for the supply of grass, it won't affect us for the next few years. We have got leases.

*President.*—It is for you to establish these things. There is nothing in your written representation about the existence of unexploited forests within a reasonable distance from the coal fields. I don't think, if I may say so, that the paper manufacturers generally quite realise that there is something which is up to them to prove and which cannot be assumed, and that is why we did our best to draw your attention pointedly to what has been suggested against your case, so as to give you an opportunity of saying what you have to say.

*Mr. Carr.*—This point has been met by us in our own individual case and, if I may say so, you are asking more on the question of the industry as a whole.

*President.*—It is not from that point of view I am asking. It is quite open to you or the Titaghur Mills or the Papermakers' Association to reply to that, but still each paper manufacturer should tell us all he can about that. Unless he can persuade us on that point, he may be unsuccessful.

*Mr. Carr.*—Quite.

*President.*—In answer to Question 24, you say that your records do not permit you to answer this question. I quite recognise that it may be difficult for you to give all the figures we wanted. Can you give the figures at least for one pre-war year and one recent year?

*Mr. Carr.*—I cannot give you the figures but we have to get them from our contractors. Supposing I say we draw ten thousand maunds more from one contractor at Chota Nagpur, it will not be possible to say from which forest he has drawn this additional supply. There are about 20 or 30 forests in that area.

*President.*—If you could give us the actual quantities taken from each area for one pre-war year and for one post-war year, it would be useful.

*Mr. Carr.*—Yes, I can give you for several years if you like.\*

*President.*—In reply to Question 26, you say "the supply of grass is largely dependent upon labour and transport; eliminating these two factors there has never been a time when ample grass has not been available." You cannot eliminate these factors. Without transport, no grass will be available. You say in the same answer "we look upon the supply of suitable paper making material in India as unlimited." In a certain sense, it is unlimited—it is almost obvious—but the quantity that can be made commercially available is by no means unlimited. On the contrary it is restricted. It is precisely the question which has got to be cleared up.

*Mr. Carr.*—Can it be demonstrated till the materials are wanted?

*President.*—Paper has been made in India for the last 40 years, and by this time it seems reasonable that the question should have been cleared up to a large extent, so far as grass is concerned.

Then in reply to Question 31 you say "we know of no grass in India that can in any way compare with *sabai* for making papers comparable to Esparto papers." Have you actually tried any of these grasses? Have you made experiments in your mills?

*Mr. Carr.*—We have tried some. The Titaghar Mills have tried far more. Government figures show that.

*President.*—As far as you can judge, if paper making cannot be made a success with *sabai* grass, it cannot be done with any other grass?

*Mr. Carr.*—No, not Esparto paper.

*President.*—In your answer to Question 35 you say that freight concessions from the railway are under consideration. Is this the freight on grass you are speaking of?

*Mr. Carr.*—Yes. We have just got some concession from the 1st of June.

*President.*—Has it been sanctioned?

*Mr. Carr.*—Yes.

*President.*—Could you tell us what it amounts to?

*Mr. Carr.*—I am afraid I could not tell you.

*President.*—Have you not got the information here?

*Mr. Carr.*—I could give it to you but the other firm has given it.

*President.*—If one firm has given it, it is enough for our purpose. I suppose that you have not got any information as to the freight that the foreign producer has to pay on his raw materials. What I am thinking of is this. Take a paper mill in England which is making Esparto grass paper. Where would it get the Esparto grass from?

*Mr. Carr.*—From Northern Africa or Spain.

*President.*—Have you any idea of the freight that the British mill would have to pay on its grass?

*Mr. Carr.*—I could not tell you. But the cost of Esparto grass is £6-10-0 per ton.

*President.*—That is the cost at the mill?

*Mr. Carr.*—Yes.

*Mr. Ginwala.*—You gave evidence before the Fiscal Commission and Sir Willoughby Carey and you made certain statements before it. I want to know whether you have changed your views since then on some of those points.

*Mr. Carr.*—Do you mean in regard to raw materials?

*Mr. Ginwala.*—Yes, with regard to the availability of raw materials. It is very important because you and Sir Willoughby Carey gave evidence together:—

"Q. You say that this country has a sufficient quantity of raw materials. Would that apply to your most important raw materials? A. (Mr. Carr). There are many kinds of material. Q. At the present moment, would it apply to the grass that you use, is it sufficient? A. Probably not. Q. You would have to go to other alternatives? A. Yes. Q. Possibly such as bamboo? A. Yes."

\* See Statement II (iv).

*Mr. Carr.*—That I have said to-day. I have not gone back.

*Mr. Ginwala.*—It is not a question of your going back. I am not putting that for that purpose. It is necessary that you should explain because somebody else may bring it up. What you were saying was that probably there was not sufficient supply of the kind of raw material you are using.

*Mr. Carr.*—I say the same to-day. But my evidence is perfectly valueless by the side of Mr. Raitt's or Mr. Pearson's. They know about all the forests. I have not looked for any beyond what we require.

*Mr. Ginwala.*—We are now considering the possibility of *sabai* grass.

*Mr. Carr.*—May I go one step further? If we make much more good white *sabai* grass paper now, I don't think that we can sell it.

*President.*—In order to make it quite clear what that answer means, I want to ask you this. Supposing the importation of foreign paper were prohibited, there may be two reasons why you could not increase your sales beyond a certain limit you might be unable to transport the paper to the more distant markets and sell it at a price at which people would buy. Is that what you mean, or is it that the demand for the kinds of paper which can be made from grass would be completely supplied?

*Mr. Carr.*—Both.

*President.*—Merchandise price is another question. Your request for protection means that you want to get into the more distant markets where you cannot compete at the present price. If the total demand in India for the kind of paper that is made from grass is to-day nearly supplied by the Indian mills, it is quite a different thing.

*Mr. Carr.*—Yes. When I answered the other question, what was in my mind was that there was not an unlimited demand in India for the kind of paper made from grass.

*Mr. Ginwala.*—Grass makes a better class of paper for which there is not an unlimited demand?

*Mr. Carr.*—That is so.

*President.*—I am quite willing to admit that. Supposing the total demand in India was about 25,000 tons it might be quite possible that there would be ample *sabai* grass to make that quantity, but there might be very little room for expansion because you may have already reached 20,000 out of the 25,000. I am taking purely arbitrary figures.

*Mr. Carr.*—Yes.

*Mr. Ginwala.*—The position has changed since you gave evidence before the Fiscal Commission, before which you said:

“Q.—Is your wood pulp imported from abroad or your raw material from India cheaper?”

A.—The cost of grass which is the main staple here, has now risen so much that wood pulp to-day is almost on a parity with grass in India.

Q.—That is to say, as delivered at the works.

A.—You can get paper from imported pulp almost as cheaply as you can from Indian grass. That is so just at the present moment, because grass has increased very much in price.”

*Mr. Carr.*—It has changed. There is very little difference at the present moment between imported pulp and grass from our farthest fields but the average cost of grass makes grass the cheaper material.

*Mr. Ginwala.*—You say you could get your paper from imported wood pulp almost as cheap because the grass has increased very much in price. Therefore, I take it, the position has changed slightly since then.

*Mr. Carr.*—Changed considerably in our fields. We are opening entirely new forests 200 miles away. Actually in the past two years we have reduced our cost on our distant field by 4 annas per maund the year before last and three annas and some pies last year.

*Mr. Ginwala.*—You say further down “With the increase of railway freight and the fact that we have to go further afield for our grass requirements, we have to pay very high rates for collecting grass now. I think both our mills are trying to get grass from the Punjab to Madras.” If that was the position then grass is more or less an impossible proposition commercially.

*Mr. Carr.*—We have not used those distant sources of supply since that time. As a matter of fact circumstances began to improve.

*Mr. Ginwala.*—Were you using more grass during the war than you are now?

*Mr. Carr.*—We did not use more grass: our outturn was down but a bigger percentage of grass was used, the total aggregate was not bigger.

*President.*—When did you say you opened that big field at Ramnagar? .

*Mr. Carr.*—About 1919.

*Mr. Ginwala.*—Look at Question 13. We want to make a comparison: so we must reduce the figures to the same terms: that is to say, we should either take fibre or pulp. If I convert this grass of 6,500 tons into 2,200 tons of pulp it would be near enough?

*Mr. Carr.*—Yes.

*Mr. Ginwala.*—The quantities are nearly equal in these three groups:—

Grass . . . . .	2,200
Pulp . . . . .	2,500
Other stuff . . . . .	2,250

Very nearly the proportion is the same. The point is that you are able to use only  $\frac{1}{3}$  of your natural raw materials for your total production. I mean pulp is imported, rags, jute and waste paper are only a limited quantity and you cannot say these are natural raw materials.

*President.*—And also it is doubtful whether you have any practical advantage in price. These are only waste.

*Mr. Ginwala.*—The point is that you are only able to use  $\frac{1}{3}$  of grass.

*Mr. Carr.*—That is what we did and I have explained the reason.

*Mr. Ginwala.*—The position is that the natural raw materials are only  $\frac{1}{3}$  of your total requirements of raw materials.

*Mr. Carr.*—I see your point: these rags, etc., are waste material.

*Mr. Ginwala.*—Its supply is limited.

*Mr. Carr.*—Hardly that, if you pay a fair price.

*Mr. Ginwala.*—It is not like grass or other things of which quantities are more in abundance. You may, no doubt, be able to get your rags at a price.

*Mr. Carr.*—I think we can treble our supply of rags and jute if we wanted them.

*Mr. Ginwala.*—You can. It is like this: in the steel industry you make castings from scrap but you cannot build a huge industry on it. The same thing applies to these rags and jute. You cannot make a big industry out of these in a country, whereas on the natural resources you may.

*Mr. Carr.*—Yes.

*Mr. Ginwala.*—With regard to the source of supply I want the following information—the average rate of grass from each one of these fields and under that you can give these various headings we have asked for. Chota Nagpur is Rs. 56-4-0.

*Mr. Carr.*—That is the average cost for our grass.

*President.*—If you can give us royalty, freight, etc., of the other fields it would be useful.

*Mr. Carr.*—Chota Nagpur—Rs. 1-4-0 per maund into our godown; Ramnagar—Rs. 2-7-0 per maund into our godown.

*Mr. Ginwala.*—You have got these separate fields: can you give them

separately in the form in which we have asked for them.

*Mr. Carr.*—Yes.\*

*Mr. Ginwala.*—Then I want you to give what total quantities you get from each one of these fields and the total quantities available in each.

*Mr. Carr.*—Yes.

*Mr. Ginwala.*—May we take it that Rs. 56-4-0 is the average price of your grass?

*President.*—It must be higher as the average freight must be higher than that. You can give the average.

*Mr. Carr.*—Yes.

*Mr. Ginwala.*—You have got a lease for ten years. Does it apply to all your fields?

*Mr. Carr.*—Yes.

*Mr. Ginwala.*—Is it not a short period? Is there no option?

*Mr. Carr.*—Not in the case of the Chota Nagpur field, and we hope to get a lower price next time.

*Mr. Ginwala.*—With regard to the other raw materials, rags, jute, hemp and other things, what is the agency by which you get them?

*Mr. Carr.*—Contractors.

*Mr. Ginwala.*—Have you fixed rates for them?

*Mr. Carr.*—Yes.

*Mr. Ginwala.*—It is their business to go and get rags?

*Mr. Carr.*—There are men who supply rags to Titaghur and to our Company. We have special men for hemp. They collect very good materials, and they are paid on contract rates.

*Mr. Ginwala.*—You say that, so far as you are concerned, they will always be available in reasonable quantities and at reasonable prices?

*Mr. Carr.*—I think so.

*Mr. Ginwala.*—This royalty of Rs. 24 a ton for grass, is not that a very big amount?

*Mr. Carr.*—Very high: that is on 75,000 maunds output. If we take what we could get on the full output we would get it at  $\frac{1}{3}$  the figure.

*Mr. Ginwala.*—Then your freight will go up compared to your Chota Nagpur field. You are afraid it will go up, so that you would not necessarily bring the cost down?

*Mr. Carr.*—We do not want more from Ramnagar as we want to get it from a cheaper field.

*Mr. Ginwala.*—Do you expect your cheaper field to supply all your requirements?

*Mr. Carr.*—The present field that we are using—"no," but the other fields mentioned—"yes." We can get 300,000 maunds from the cheaper fields.

*Mr. Ginwala.*—Do you expect to get it? How long will it take before you get the whole quantity?

*Mr. Carr.*—I am rather waiting to get out of the Ramnagar lease.

*Mr. Ginwala.*—When does the lease expire?

*Mr. Carr.*—I think it has got 7 years to run.

*Mr. Ginwala.*—What is the royalty you have got to pay on the Ramnagar field? It does seem a very heavy figure.

*Mr. Carr.*—I shall find it out. The Ramnagar people actually did not want us particularly to take the grass, but we wanted to get the grass at the time, and we have had to pay for it. The Forest Department make more money out of the timber.

*Mr. Ginwala.*—Are these restrictions referred to in your answer to Question 21 imposed by the Forest Department, or are they natural restrictions?

\* See Statement II (iii).



*Mr. Carr.*—The Forest Department. I think one of their fears is fire if people go in and collect grasses.

*Mr. Ginwala.*—What is the period of collection for you?

*Mr. Carr.*—We can begin as early as we like. We begin early in November.

*Mr. Ginwala.*—You have got just about six months, that means?

*Mr. Carr.*—Yes.

*Mr. Ginwala.*—You have to stock your grass?

*Mr. Carr.*—We would like to bring it to the mills when we get wagons.

*Mr. Ginwala.*—It is unfortunate that your season corresponds with the busy season of the railways. If you had the monsoon to collect the grass it would be an advantage.

*Mr. Carr.*—We try to take advantage of monsoon conditions by stocking in the despatching centres.

*Mr. Ginwala.*—You could not cut it in the monsoon?

*Mr. Carr.*—We cut it in the hot weather and stock it at the stations.

*Mr. Ginwala.*—Stations are 20 to 25 miles from the fields on an average?

*Mr. Carr.*—It would be 15 miles probably.

*President.*—You have said that it never exceeds 25 miles.

*Mr. Ginwala.*—That 25 miles I suppose you transport by cart or coolies?

*Mr. Carr.*—Bullock carts in Chota Nagpur.

*Mr. Ginwala.*—In these figures we have asked for will you include the cost at which you have to carry your stuff from the fields to the despatching stations?

*Mr. Carr.*—We may be able to get these charges from the contractors. I shall give you full details we can get for the grass.

*Mr. Ginwala.*—It is really a disadvantage that you have to collect your raw materials in one half of the year.

*President.*—It might be the same with Esparto grass. I do not know the seasons in Africa.

*Mr. Carr.*—Every agriculturist would have to do it. It would not be growing all the year.

*Mr. Ginwala.*—With regard to bamboo the position is somewhat the reverse: they cut the bamboo, but they cannot sometimes float it in the dry season?

*Mr. Carr.*—Yes.

*Mr. Ginwala.*—In your case there is not much difference between your raw materials except waste papers. If you have got an abundance of raw materials, why should not you use the raw materials from which you get the best yield?

*Mr. Carr.*—You have got to make a proper mixture to get your papers right. You can only put in a certain amount of rags in white paper. Grass only would come up to 90 per cent.

*Mr. Ginwala.*—You cannot manufacture paper except by a mixture of these materials?

*Mr. Carr.*—I do not know that any paper is made from one raw material only other than wood pulp. The newsprint paper manufacturers at home must have some sulphite pulp.

*Mr. Ginwala.*—So that your point is that, even though the yield is better from hemp and jute and the price is not unfavourable, you cannot make use of them to the exclusion of grass.

*Mr. Carr.*—No. It is the better yield of the *sabai* grass which makes it more suitable than other grasses.

*Mr. Ginwala.*—Your *sabai* grass has not got as much yield as Esparto.

*Mr. Carr.*—No. It is as 33 against 42.

*Mr. Ginwala.*—With regard to bamboo I think you have seen this report of Mr. Raitt on Cuttack?

*Mr. Carr.*—I have been down there myself.

*Mr. Ginwala.*—It is of some importance because he refers to the delivery of this pulp at Ranigunge. Yours is the only mill there. Do you consider that that is a good commercial proposition?

*Mr. Carr.*—I do. We believe there is a tremendous future for paper pulp here and we believe there are certain difficulties in connection with it, which will cost a good deal. We have no money at the moment to tackle it: other people are tackling it and, as in other things, the pioneers will be followed by a great many others.

*Mr. Ginwala.*—Speaking generally, do you agree with other recommendations with regard to the manufacture of pulp in Cuttack. It is the nearest place from your point of view.

*Mr. Carr.*—It is an excellent site for a mill.

*Mr. Ginwala.*—What he suggests is that you should manufacture your pulp at Cuttack, and the paper should be manufactured at Ranigunge.

*Mr. Carr.*—That is a point we are taking up.

*President.*—When the Talcher coalfield is opened, Cuttack may be a very suitable site for a paper mill.

*Mr. Carr.*—The railway cuts the river and there is a canal right down to the station.

*Mr. Ginwala.*—Apart from the question of protection, if you had finances available, would you proceed with this scheme?

*Mr. Carr.*—We were going into that. We were in touch with men at Cuttack over this.

*Mr. Ginwala.*—Would you take your pulp making plant to this place, or would you have a new plant altogether?

*Mr. Carr.*—As far as we are concerned it would probably pay to make the half-stuff at Cuttack and send it to Ranigunge.

*Mr. Ginwala.*—Can you give us an estimate of what it would cost you to instal a new plant?

*Mr. Carr.*—I will.

*Mr. Ginwala.*—Can bamboo pulp take the place of wood pulp for the purpose of manufacturing newsprint?

*Mr. Carr.*—I cannot tell you that. At the moment there is no indication of making mechanical pulp out of bamboo.

*President.*—The important point in that connection is the question of price?

*Mr. Carr.*—Yes.

*Mr. Ginwala.*—Mr. Raitt says that it could be delivered at your mill at about Rs. 165. The import price of wood pulp landed is about Rs. 250 per ton: is it not?

*Mr. Carr.*—Yes.

*Mr. Ginwala.*—If you could produce bamboo pulp at a figure below the cost of the wood pulp from which the newsprint is manufactured, it seems to be a commercial proposition.

*Mr. Carr.*—We might probably replace it.

*President.*—Is there any reason why bamboo pulp should be unsuitable for newsprint except on the question of price?

*Mr. Carr.*—None that I know of.

*President.*—That is really the point Mr. Ginwala's question alludes to.

*Mr. Carr.*—The newsprint that comes out here is probably no large percentage.

*Mr. Ginwala.*—One of the questions that arise is this: supposing other paper only is protected, can mechanical wood pulp paper be substituted for ordinary paper?

*Mr. Carr.*—For the lower grades, yes: I mean for the cheaper stuff.

*Mr. Ginwala.*—Can bamboo pulp replace wood pulp?

*Mr. Carr.*—As far as I can see there is nothing to prevent bamboo pulp replacing wood pulp.

*Mr. Ginwala.*—You consider that the mechanical process is cheaper than the chemical process?

*Mr. Carr.*—Yes.

*Mr. Ginwala.*—Though, as far as we know at present, bamboo cannot be converted into mechanical pulp, there is no reason to prevent it altogether from taking the place of mechanical wood pulp?

*Mr. Carr.*—No.

*Mr. Ginwala.*—You have not given us all the figures in answer to Question 34.

*Mr. Carr.*—Sulphite pulp in May 1914 was £7-10 a ton and it was £12-10 per ton in March this year. The mechanical pulp was £4-10 against £8-10 in March.

*Mr. Ginwala.*—You use both?

*Mr. Carr.*—We do not use mechanical now. We did at one time, when we had trouble in collecting materials.

*Mr. Ginwala.*—You said £12-10 but you give here £14-10?

*Mr. Carr.*—I am really giving the trade paper quotation here. That is what we paid. There are several grades pulp. Ours is easy bleaching pulp. £12-10 is sulphite news, £14 is easy bleaching pulp.

*Mr. Ginwala.*—With regard to freight concessions can you tell us what form they are likely to take?

*Mr. Carr.*—We put up a representation based upon the freight paid by other materials, and the East Indian Railway have agreed to it, and I think the Oudh and Rohilkhand Railway will also agree.

*Mr. Ginwala.*—Does that apply to your primary raw materials only or also to your auxiliary raw materials?

*Mr. Carr.*—Grass.

*Mr. Ginwala.*—Will it give you a substantial reduction?

*Mr. Carr.*—It is a quite useful percentage, 25 per cent., I think. That is my recollection.

*Mr. Ginwala.*—You are not asking for any concession on your finished products?

*Mr. Carr.*—As you will notice, we have a slight concession in that direction.

*Mr. Kale.*—I have not been able to understand your system of royalty. How is the royalty paid? You say you pay so much per ton of grass.

*Mr. Carr.*—We pay so much rent per forest. It is a rent really. Royalty is a misnomer.

*Mr. Kale.*—Is it based upon the acreage of the forest?

*Mr. Carr.*—A forest is put up for auction and we know roughly what it will yield, and we make our bid accordingly.

*Mr. Kale.*—And you pay a minimum sum for the whole area?

*Mr. Carr.*—Yes.

*Mr. Kale.*—Is that for grass only? There may be other products?

*Mr. Carr.*—We pay only for the grass.

*Mr. Kale.*—And the condition is that during certain months of the year you are to take out grass?

*Mr. Carr.*—Yes.

*Mr. Kale.*—I wanted to know how much grass you can get out of each acre of the forest. Can you give us an idea of that, so that we may form an estimate of the capacity of the Indian forests to yield grass?

*Mr. Carr.*—No. I am afraid I do not know that. In the Chota Nagpur forests we take the whole forest, but then the grass is in plots. Grass often grows in patches. I think from that forest we might expect to get up to 150 or 175 thousand maunds, but we do not know the area under grass.

*Mr. Kale.*—Quite probably, when the forest areas are put up to auction, the Forest Department knows the acreage of the plots?

*Mr. Carr.*—I don't think so.

*Mr. Kale.*—So that it is not possible for us to get an idea?

*Mr. Carr.*—I am afraid I cannot get that for you.

*Mr. Kale.*—Have not the manufacturers in Great Britain, for instance, who use grass, to face the same difficulty as you have to face? They have to import grass from as long distances as you have. Then there is the ocean freight that they have to pay. Do you think that the ocean freight is lower than what you have to pay in railway freight? I want to get at the disadvantages, if there are any, under which you labour as compared with your competitors.

*Mr. Carr.*—We will get as much of the information as we can for you.\*

*Mr. Kale.*—In answer to Question 23 you say "The area of collection of grass has been extended owing to the calls on labour from other industries, making it necessary to go further afield to obtain a sufficiency." But is it a question of drawing a comparison between the higher wages that you have to pay and the higher freight you have to pay, or is it that you do not get any workmen at all? What is the difficulty connected with the labour; is it that you have to pay higher wages or is it that you do not get any labour at all?

*Mr. Carr.*—Partly higher wages and competition from other industries.

*Mr. Kale.*—So that if you compare the higher wage that you have to pay with the higher railway freight you have to pay when you go further afield, you think the higher railway freight is lower than the increase in wages?

*Mr. Carr.*—It comes to that I think.

*Mr. Kale.*—Practically there is no labour available because it has left the area?

*Mr. Carr.*—In another year they may come back again. Many don't go to the big works in cases where they get a fair wage in agricultural work.

*Mr. Kale.*—In the tracts where you have got your grass, do you think that area is a cultivable area, which can be brought under the plough, or is it a waste area?

*Mr. Carr.*—In Chota Nagpur conditions may be described by an example of one forest which has been closed on two occasions by man-eating tigers. This shows that it is not cultivable. In the north-west the forest area is so malarious that our labour for cutting the grass has to be imported from outside.

*Mr. Kale.*—What I was asking you was this: if the population increased perhaps some of the land might be taken up for cultivation?

*Mr. Ginnala.*—The best kind of grass grows on the slopes?

*Mr. Carr.*—Yes.

*Mr. Ginnala.*—So it is not likely to be taken up under the plough?

*Mr. Carr.*—I don't think so.

#### *B.—Auxiliary.*

*President.*—For what purpose is the aluminoferric used?

*Mr. Carr.*—Water cleansing and sizing.

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\* See Statement II (ii).

*President.*—Is not a certain amount of china clay available in Seraikela?

*Mr. Carr.*—We have tried it over and over again, but it is not of the standard of the British article.

*President.*—Is the defect in the constitution of the clay itself?

*Mr. Carr.*—It is not quite good colour and is a bit gritty.

*President.*—Is there a possibility that these defects might be overcome?

*Mr. Carr.*—We might use about 25 per cent. Indian to 75 per cent. foreign clay.

*President.*—What is the yellow ochre used for?

*Mr. Carr.*—For budami paper.

*President.*—And the alkali?

*Mr. Carr.*—That is for boiling the grass.

*President.*—In answer to Question 38 (B) in the case of lime you have not discriminated between the market price and transport and other charges. Is that because you have got your own source of supply or something of that kind? There is an entry under the head "Transport" but there is no entry under the head "Market price."

*Mr. Carr.*—I am afraid I cannot explain that for the moment.

*President.*—I thought possibly it might be an all-in cost.

*Mr. Carr.*—That Rs. 16 is an all-in cost.

*President.*—Where do you get the lime from?

*Mr. Carr.*—From Katni or Sylhet. As a matter of fact lime is one of our difficulties in this country.

*President.*—This Rs. 16 a ton is the total cost of the lime delivered at the mill, isn't it?

*Mr. Carr.*—That is about it.

*President.*—If you are bringing it all the way from Katni, the transport charges must be at a very low rate surely?

*Mr. Carr.*—It is Rs. 75 per 100 maunds or 12 annas a maund. (a) is "market price" and (b) "transport and other charges." The market price in this case has been omitted.

*President.*—Will you please just make a note of it and let us have it?

*Mr. Carr.*—Yes.\*

*President.*—In answer to Question 39 you say "The manufacture of bleach is, we understand, not contemplated in India except by the factory immediately requiring chlorine." Is that with reference to the Titaghur Mill?

*Mr. Carr.*—Yes. I think some cotton people also use it.

*President.*—That is to say, it comes to this, that you think it is quite possible particular factories engaged in various industries who require bleach would manufacture it themselves, but that India is not likely to manufacture it for sale?

*Mr. Carr.*—That is my impression.

*Mr. Ginwala.*—The cost of your auxiliary materials has gone up by about 100 per cent. since before the war, has it not?

*Mr. Carr.*—It is more than that.

*Mr. Ginwala.*—If you look up your Form I you will find it has risen from Rs. 52 to Rs. 112. Is there any special reason why there has been such a big rise?

*Mr. Carr.*—These are, I think, largely influenced by wages.

*Mr. Ginwala.*—Still I think it is a very big jump. Can you give us the rates for 1914 for these articles?

*Mr. Carr.*—I will send them to you.\*

*Mr. Ginwala.*—Practically all your auxiliary raw materials are chemicals?

*Mr. Carr.*—Yes.

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\* See Statement II (iv).

*Mr. Ginwala.*—Some of them can be manufactured in your factory?

*Mr. Carr.*—We get the alkali and the caustic soda from the Maghadi Soda Company.

*President.*—Mr. Ginwala is asking whether you manufacture it yourselves.

*Mr. Carr.*—We can do it, but it is an expensive plant and the capital cost is too high.

*Mr. Ginwala.*—Is there anybody manufacturing bleach in this country?

*Mr. Carr.*—Not for sale.

*Mr. Ginwala.*—Is there a fair demand for bleach in this country?

*Mr. Carr.*—Yes, there is. It is required for filtration work, and also by the textile industry.

*Mr. Ginwala.*—It is rather strange that nobody has started making it.

*Mr. Carr.*—I believe the process for making bleaching powder is such that it is very doubtful if you can carry it on in this country. The heat is tremendous and the physical labour required is very heavy and the fumes are dangerous. We can make bleaching liquid but that is not suitable for sale.

*Mr. Ginwala.*—Amongst these chemicals, there are none, I take it, which are used exclusively by the paper manufacturers?

*Mr. Carr.*—Aluminoferrie is used generally, I think. I don't know whether caustic soda is used much out here. I am afraid I can't say.

*Mr. Ginwala.*—The question arises whether any relief should be given, if it was necessary, by removing the duty on raw materials. That is why we asked you that particular question (in Question 85) about the customs duties on imported materials. You have not given us the total quantity of the duty paid.

*Mr. Carr.*—I don't think that you asked for the total duty in 85.

*Mr. Ginwala.*—We wanted you to give us the money value of these disadvantages. We gave an illustration in our note there as to what sort of information we wanted.

*President.*—What it comes to is this, that, in so far as you have got to import materials like chemicals from abroad, you are under a certain disadvantage as compared with the manufacturer in Europe. What we should like to be able to do is to put a figure on that disadvantage.

*Mr. Ginwala.*—Before the Fiscal Commission I think that you laid a considerable amount of emphasis on the duty that you have to pay on these various chemicals.

*Mr. Carr.*—Yes.

*Mr. Ginwala.*—Either you or Sir Willoughby Carey asked that the duty should be removed on these chemicals. The removal of the duty on these chemicals altogether is a different proposition. Some of these chemicals are used by other people, are not they?

*Mr. Carr.* Yes. I can get these figures for you.

*Mr. Ginwala.*—In that case I want to know what form the exemption should take.

*President.*—One rather wants to be able to say, if the duty on bleach, for instance, were removed, the difference would be so many annas a ton. That, I think, is the vital point. It would be better to confine it to the chemicals which are not manufactured in India. The moment you come to an article manufactured in India, you raise another issue which would complicate things a good deal.

*Mr. Carr.*—Bleach is practically the only thing. You can get alumino ferrico now out here. You can get clay and rosin also now.

*President.*—I have no objection to china clay being considered because you have given definite reasons why the Indian product cannot be used but

where you habitually get your supplies of a material in India, it would be a waste of time to raise the question of the customs duties.

*Mr. Carr.*—Yes. The point I have taken down is to show the relief that would be given by the removal of the duty on china clay and chemicals which are not manufactured in this country.

*Mr. Ginwala.*—Supposing Government thought that relief ought to be given, how are they to give it to you? That is one of the questions that we may have to consider.

*Mr. Carr.*—I am afraid I have not considered that.

*Mr. Ginwala.*—If the duty was to be removed altogether, that is a very simple question.

*President.*—You know what the financial situation of the Government of India is, and they might say "However beneficial this measure may be, we cannot do it."

*Mr. Ginwala.*—Supposing it became necessary to make any recommendation on that point, I take it the customs authorities could always find out from your books how much duty you had actually paid?

*Mr. Carr.*—They could always find out.

*Mr. Ginwala.*—Would you have any objection to submitting your books to an examination by the Customs authorities or any other authority?

*Mr. Carr.*—To Customs authorities I can say "yes," but to any other authority I can't say till I know who that authority is.

*President.*—Any other authority must be somebody deputed by the Customs authorities.

*Mr. Ginwala.*—You have no objection to that?

*Mr. Carr.*—No.

*Mr. Ginwala.*—May we take it that so far as you are concerned you don't sell any of these chemicals in the bazar?

*Mr. Carr.*—Yes.

*Mr. Kule.*—In answer to Question 37, you have given certain percentages. I am not able to understand these percentages. The question is "What quantity of each of the chief auxiliary raw materials is required per ton of finished paper." You have not given the quantities. You have given percentages. Are these for a ton of paper?

*President.*—Does that mean that 8 to 12 per cent. of a ton of bleach is required to make a ton of paper?

*Mr. Carr.*—That is the percentage of a ton to make a ton of paper.

*Mr. Kule.*—It means that 1/8th to 1/12th of a ton of bleach is required to make a ton of paper?

*Mr. Carr.*—To make white paper we would take about 10 per cent. of bleach.

*Mr. Ginwala.*—If you don't make these chemicals what do you do with your recovery plant?

*Mr. Carr.*—We recover the caustic soda and use that again and work it up with lime. That is why we want lime. We use it again with fresh caustic soda to boil grass.

*Mr. Ginwala.*—That is a chemical process?

*Mr. Carr.*—Yes, we ought to save about 70 per cent. of the cost.

*Mr. Ginwala.*—Do you save that?

*Mr. Carr.*—We ought to.

*Mr. Ginwala.*—What do you save then? I understand that some manufacturers save as much as 85 per cent.

*Mr. Carr.*—That is theoretical. I believe that there are one or two firms who work up to that. We work at present on 54. We have never done better than 64 or 65.

*Mr. Ginwala.*—What is the reason?

*Mr. Carr.*—I think that it is due to the condition of the grass which makes it difficult to recover.

*Mr. Ginwala.*—Is it a recent plant?

*Mr. Carr.*—It is a modern plant. We put it in before the war.

### III. LABOUR.

*President.*—In answer to Question 46, you say "Indian labour has proved quick to work in subordinate skilled positions and a large labour force has been built up, which is efficient in its various branches. It has not so far proved capable of supervisory appointments, for although several Indians have presented themselves for training and been given every facility, they have, without exception, failed to carry through the training which is required to make an expert supervisor, and have generally left the mill after acquiring superficial knowledge." In a sense, that is disappointing. If the industry is really suited to Indian conditions, it ought to be the case that it should be capable of being entirely managed by Indians. Your experience has not encouraged that hope.

*Mr. Carr.*—I think that they come at a wrong time. They come after finishing college. They have got to begin earlier. They come at about 22 or 23, and they cannot really get a good understanding much under five years. A fellow from the Punjab stayed with us for about three years and he went to America to finish it up. He learnt well, but none of them wanted to carry on in the mill and take a position in the mill.

*President.*—Were there any Bengalees?

*Mr. Carr.*—So far as I recollect we had two Assamese, two Punjabis and one Bengalee.

*President.*—In reply to Question 45 you say that 14 Europeans are employed at Ranigunge, and this number has to be maintained whilst the whole factory is running regardless of output. How would that compare with the number of Europeans you employed, say, 20 years ago?

*Mr. Carr.*—I should think we have added 6; when giving evidence before the Industrial Commission, our number was 12. We had to add two more, having to go in for more expert supervision.

*President.*—I have not got the answer yet.

*Mr. Carr.*—We have added six more in the last 20 years.

*President.*—So far, no progress has been made in reducing the number of Europeans employed.

*Mr. Carr.*—It is now a bigger mill than it was 20 years ago. We are making more paper. We have to watch it in a more expert way too.

*President.*—In 1909 you turned out 5,200 tons and now your output is 6,500 tons.

*Mr. Carr.*—That 5,280 was a bigger percentage of our capacity than 6,500 tons. It is the Indian labour that is holding us back now.

*President.*—And also your experience tends to show that the burden which the industry carries on account of the higher salaries paid to Europeans promises to continue for a very long time. Practically no progress has been made in 20 years, and it would take a long time at that rate.

*Mr. Carr.*—May I mention, for instance, that one of the extras is an Assistant Manager? We have got a big mill and we cannot depend on one man. Two extras are foremen. There are more beaters to be looked after and more paper is being made. Another man is a chemist. So that I don't really think that it is in any way retrograde as regards the employment of Indian labour. Simply our requirements are greater in the matter of supervision.

*President.*—So far, there has been no displacement of Europeans by Indians?



*Mr. Carr.*—None at all.

*President.*—Can you give us the total wages paid to these people, I mean Europeans?

*Mr. Carr.*—Four years ago we have added another salesman. Last year our total European pay bill including the salesman and the Mill establishment was Rs. 188,013.

*President.*—In your answer to Question 47, you have compared the rates of wages paid to paper makers in the United Kingdom with the wages you pay for your imported labour. It means that the extra amount is something like from 50 to 67 per cent.

*Mr. Carr.*—Yes.

*President.*—Assuming that the Indian in this country would not be paid higher than the European in his own country, it would mean that if you could employ Indians, you would save about 2/5th of Rs. 1,88,013.

*Mr. Carr.*—Yes, if we could.

*President.*—What is the extra burden really you are bearing in consequence of your being obliged to employ imported labour? I am not suggesting that you should not. I am merely putting a figure on the extra burden that you are incurring. If you take off 2/5th of Rs. 1,88,013—would that be somewhere near it?

*Mr. Carr.*—Yes.

*President.*—That would mean taking off Rs. 75,000?

*Mr. Carr.*—Yes.

*President.*—On the basis of your output of 7 or 8 thousand tons a year, it means about Rs. 10 a ton?

*Mr. Carr.*—Yes.

*President.*—I wanted to see how it worked out. Then I notice that you have asked that your reply to Question 48 as to the rates of wages paid should be treated as confidential.

*Mr. Carr.*—For the same reason. They are not always known to other employers. I withdraw my objection.

*President.*—Then, you have given us wages for two years 1917 and 1923. Would the wages in 1917 be about the same as in 1914?

*Mr. Carr.*—About that. There had not been much increase.

*President.*—At the end of your answer to Question 49 you say "Since January 1921 they have been paid extra at above rates for 13 recognised holidays and since June 1921 extra at above rates for Sundays." They don't work on Sundays. Do you mean to say that they are paid double wages?

*Mr. Carr.*—They used to receive Rs. 10 a month. When they were given a rise from Rs. 10 to Rs. 12-8-0, or whatever the figure was, that was taken on a basis of 26 working days in the month. A year later they said that they were paid only for working days, and that they ought to be paid per month. We had to let them have it.

*President.*—In your reply to Question 50, you express the opinion that wages are at present too high, and that the man can earn all the money he wants in less than a full month and he absents himself.

*Mr. Carr.*—That is so.

*President.*—I take it that that would be common to all industries in the coalfields area. It does not apply to your industry only.

*Mr. Carr.*—It applies all over.

*President.*—In Calcutta too?

*Mr. Carr.*—I think so.

*President.*—Your complaint is not that you have got to pay them too much, but that you don't get a sufficient return for your money?

*Mr. Carr.*—Yes.

*Mr. Ginwala.*—You say in your answer to Question 42 that labour has to be collected. Do you collect the labour?

*Mr. Carr.*—Our man goes up in September and he advances to the Sirdar who collects the coolies to cut the grass.

*Mr. Ginwala.*—They are paid by the piece?

*Mr. Carr.*—They get so much per maund for cutting.

*Mr. Ginwala.*—You pay the railway fare, etc.?

*Mr. Carr.*—Yes.

*Mr. Ginwala.*—Is it the United Provinces labour or have you got to get it from other provinces?

*Mr. Carr.*—It is United Provinces labour.

*Mr. Ginwala.*—There is nothing like "indentured" labour?

*Mr. Carr.*—No. The coolies come and stay for about three months. They won't stay after March.

*President.*—Where do they go to after March?

*Mr. Carr.*—They go back to their homes.

*Mr. Ginwala.* As regards your answer to Question 45, we have not seen the Upper India Couper Paper Mills, but they don't employ any Europeans, I think, and yet they appear to have a very prosperous balance sheet.

*Mr. Carr.*—They have got a good mill as well!

*Mr. Ginwala.*—They have always paid a dividend and they have also been paying a large bonus. They have got a reserve of Rs. 21 lakhs.

*Mr. Carr.*—I wish we had.

*Mr. Ginwala.*—It is for you to follow their example and employ more Indian labour.

*President.*—The point is really this. Here is a paper mill in Lucknow which has succeeded in maintaining a dividend for a long period of years and has paid very handsome bonuses since the early outbreak of the war. It does not employ many Europeans. *Prima facie* that does create a presumption that Europeans are not necessary.

*Mr. Carr.*—There is the argument that, if they had Europeans, they would probably have had a better return. These mills are not comparable. You are comparing a grass mill with what has been a *badami* mill, except for their stamp paper. They have had a *badami* monopoly in the up-country markets. They make good *badamis*.

*Mr. Ginwala.*—They use about 30 per cent. or so of grass. The raw materials they are using are pretty much in the same proportions as yours. They must be going in for more or less the same kind of production.

*Mr. Carr.*—You have their figures but I have not. I don't think that they make the same percentage of white paper as we do.

*Mr. Ginwala.*—Will that account for the whole of this difference?

*Mr. Carr.*—I think that very largely it does. To the best of my belief they have spent nothing like most of us have in keeping their mills in order.

*Mr. Ginwala.*—That would hardly affect the question of the employment of European labour. I am trying to point out that that is a point which does arise. It shows this much anyhow that they can employ Indian labour and still make profits and show a good balance sheet.

*Mr. Carr.*—Quite.

*Mr. Ginwala.*—I take it that you are a large employer of Indian labour in your other departments.

*Mr. Carr.*—Yes.

*Mr. Ginwala.*—Are these rises in wages in accordance with the rise you have given in your other departments?

*Mr. Carr.*—From 1917-23 I should think that they are higher than in some industries. I think that they were about equal to the Mistri labour

in other departments of our office—a good deal higher than Tea Garden labour for instance—about the same as coal.

*Mr. Ginwala.*—In your case the position appears to be reversed, generally speaking, in that, in the case of artisan class, the rise is less and in the case of coolies the rise is more.

*President.*—Are you thinking of the Porbandar Cement Company?

*Mr. Ginwala.*—Also of Tatn's.

*Mr. Carr.*—They have got to collect labour. We are keeping a labour force.

*Mr. Ginwala.*—It struck me as rather curious that, in the case of other firms we have examined so far, they have given a rise of 80 to 100 per cent. to the artisan class and to the other men 40 to 60 per cent. and in your case it is the other way about.

*President.*—My impression is that in the coalfields the unskilled labour has got a bigger increase than the skilled labour.

*Mr. Ginwala.*—Is it because you are situated in the coalfields?

*Mr. Carr.*—The increase is relatively less in the case of a cooly than in the case of a fitter, because, e.g., the latter got from Rs. 20 to Rs. 30 and the cooly from Rs. 9 or Rs. 10 to Rs. 18.

*Mr. Kale.*—Will you please tell me who these 14 Europeans are?

*Mr. Carr.*—

- 2 salesmen.
- 1 Manager.
- 1 Assistant Manager.
- 1 foreman.
- 2 machinemen.
- 2 beatermen.
- 3 engineers.
- 1 electrical engineer.
- 1 chemist.

*Mr. Kale.*—Do you appoint them in England?

*Mr. Carr.*—We bring them under indenture.

*Mr. Kale.*—What position do they occupy at Home before you bring them here?

*Mr. Carr.*—Just the same at Home.

*Mr. Kale.*—You take them from some mill or factory—you do not train them?

*Mr. Carr.*—No. They are trained in a mill at Home from their 14th year and they are only recruited at a later age.

*Mr. Kale.*—Your answer to Question 46 appears to me rather a severe indictment on educated Indians—the kind of Indians who have presented themselves to you for training. I should have thought that you would have made some selection for training. I am not surprised that Indians of the right type have not presented themselves to you. I should have thought that as your firm has been in existence for some 30 years and more you might have selected some better men and trained them.

*Mr. Carr.*—I do not think it appeals very strongly up to date to Indians.

*Mr. Kale.*—But how is it in other industries it has been possible to pick up Indians with better training—in Bombay for instance?

*Mr. Carr.*—Paper making is a trade which you may call hereditary. You will find the father and the son in the same trade. It means a long apprenticeship.

*Mr. Kale.*—Do you think there is anything in the paper manufacture which militates against the Indian taste or custom? I quite understand

that in the leather manufacture, but in paper manufacture there is nothing which is regarded as beneath them by the middle class people of India.

*Mr. Carr.*—There is nothing to prevent them from taking it up.

*Mr. Kale.*—If in other factories, say in Bombay and Lucknow, you find all the industrial operations are successfully performed by Indians, and they can pick up training in factories, you cannot very well say that better class of men cannot be obtained?

*Mr. Carr.*—The possible explanation is that they get only 50 per cent. of their output with Indian management and we cannot afford it. It cannot suit us at the present time; if we reduced our output our expenses would go up.

*Mr. Kale.*—You are assuming that, if Indians are trained and appointed, their efficiency would be lower, and your production would decline?

*Mr. Carr.*—Not on the equal training. The point I am trying to make is that the training is so severe and long that it has not appealed to Indians up to date.

*Mr. Kale.*—That is the very point I am raising, whether you have given a fair trial to Indians. The wording of your answer is rather doubtful. You speak of Indians "presenting" themselves before you.

*Mr. Carr.*—They apply for jobs in the mill.

*Mr. Kale.*—Unless they know that there is a chance of promotion and so on, no good Indian will apply to you.

*Mr. Carr.*—In economic stress any European would look for a job everywhere and an Indian should do the same. We have nothing against them and we would rather have them at moderate expense.

*Mr. Kale.*—I do not know the conditions in your factory, but there is a sort of feeling that, if they go to a factory managed by Europeans, they are not likely to get any encouragement to rise. Therefore the good type of Indians do not go there. Is there any way of overcoming the difficulty unless you make an effort to get the better type of men?

*President.*—Is there any system of apprenticeship for instance?

*Mr. Carr.*—Three of these men I have mentioned came as apprentices, but they asked to be released, because they wanted to go out. One, as a matter of fact, left after 18 months and became the Technical expert of a Local Government. He considers he has learnt enough, but he was not good enough in our mill.

*Mr. Kale.*—What did you pay that man?

*Mr. Carr.*—I do not suppose he got anything: he was learning his business.

*Mr. Kale.*—I am not surprised that he left you and went elsewhere.

*Mr. Carr.*—He was learning and we do not pay our apprentices. We have some Anglo-Indian lads who come and work during their course of training and we are training them very successfully.

*Mr. Ginwala.* In the Chemical department you should have no difficulty with Indians. But have you any Indians there?

*Mr. Carr.*—We have not at the moment: we have only an analyst.

*Mr. Ginwala.*—In some of the big laboratories they have Indian chemists.

*Mr. Carr.* Undoubtedly. The only reason we have our European chemist was this. He was brought out as an assistant manager with chemistry knowledge, but he was not experienced enough to be assistant manager and so we put him as chemist.

*Mr. Kale.*—I am afraid you have to adopt some system by which you will have to give encouragement to Indians for training. You cannot wait for Indians coming and asking you for appointments.

*Mr. Carr.*—You suggest we should advertise in papers? We have been in correspondence with Provincial Governments about it and that is where all our men have come from up to date.

*Mr. Kale.*—Have not Provincial Governments been able to give you any people?

*Mr. Carr.*—We never pressed them. They asked us whether we would give the kind of training required and we said we would be glad to get the right type of Indian if we could get them. Five did turn up. But it is such a hard type of apprenticeship that it did not appeal to them. Unless they come a little earlier, say at the age of 15 or 16, and stay for a long time they won't have the necessary knowledge.

*President.*—You would have to make some arrangement for evening classes. If they joined at 15 or 16 and did not get any subsequent educational training, they would never be fit for higher posts.

*Mr. Ginwala.*—There are a number of technical schools in this country. Would not the technical schools like to send their boys for practical training in the Works?

*Mr. Carr.*—We have not tried them: we shall be very glad to do it.

*Mr. Kale.*—Our information in Jamshedpur was that on the whole they wanted about 30 candidates for the technical institute, and they got applications from 1,500 or 2,000, and in your case, you say, there are no applicants. The work there is much harder than yours. Then how is it that you did not get men? I think your system is defective or you have got no system.

In answer to Question 49 you give us the comparative figures representing the increase in wages between 1917 and 1923. Was there no increase given between 1914 and 1917?

*Mr. Carr.*—They were just about the same.

*Mr. Kale.*—What you say here is "The average cost for Indian mill labour per ton of paper was Rs. 18-0-7 in 1914 and Rs. 43-13-9 in 1923." This means an increase of 140 per cent. and is not borne out by the figures you have given. Therefore, I conclude that the 1914 wages must have been lower than in 1917.

*President.*—He must have been getting a higher output in one of those years. In 1914 apparently you did not get much very near your output.

*Mr. Carr.*—Three machines in 1914 as against four in 1923.

*Mr. Kale.*—The increase of 140 per cent. is not, however, borne out by the figures.

*Mr. Carr.*—Men like engineers, etc., are paid Rs. 100 a month but these are just the bulk of the labour.

*Mr. Kale.*—You say that the wage bill of the European employes comes to Rs. 1,82,000. That means on an average each employé gets Rs. 1,100 a month.

*Mr. Carr.*—There are the passages to be paid.

*Mr. Kale.*—I am speaking of the emoluments. Would not all these people get, on an average, Rs. 1,100 each? Do you think it is comparable to what they earn in England? Would it be twice as much?

*Mr. Carr.*—Take the manager: he gets six times as much as a machine man.

*Mr. Kale.*—I am speaking of the others.

*Mr. Carr.*—Our salesman has got 20 years' experience out here. He gets a big salary. You could take off Rs. 60,000 for the two men. That will give an average of 800 for the other men.

*President.*—This amount of Rs. 1,80,000 includes passages, etc.?

*Mr. Carr.*—Everything.

*Mr. Kale.*—From the figures that you have given in answer to Question 47 it appears that the difference between the two is 50 per cent. They pay £20 in the United Kingdom. Will the average salary of an employé from a British mill be, say, Rs. 500?

*Mr. Carr.*—I suppose something like that. We have been looking for a manager and the difficulty of getting one is tremendous. One is ready to take the foreman of a big mill and appoint him as manager.

*Mr. Kale.*—In answer to Question 50 you say that the efficiency, as reflected in the hands employed, is probably as 4 to 1. Do you find this out from the output per man?

*Mr. Carr.*—Judging rather by the mills at Home we employ 12 men where they employ 3, roughly for the same output.

*President.*—Would the wages be four times as high on the average? You have told us that you require four times the number of men here. If the wages in England are four times as high you are still not worse off.

*Mr. Carr.*—I do not think we are worse off really.

*President.*—That would not of itself prove that the wages bill will be greater, but you have got an extra burden on account of the European staff.

*Mr. Carr.*—It will be 100 rupees a week and the average at Home would be £4 a week.

*Mr. Ginwala.*—I think you will get him now at that wage.

*President.*—What was the figure for the total Indian wages bill?

*Mr. Carr.*—Rs. 3,25,900 for 1,200 Indian employes.

#### IV. POWER INCLUDING FUEL.

*President.*—In answer to Question 56 you say that your fuel consumption is  $6\frac{1}{2}$  tons per ton of paper. Is that what you regard as a normal figure?

*Mr. Carr.*—This is not too bad. We have been up to  $7\frac{1}{2}$  sometimes.

*President.*—You put that forward as a reasonable figure?

*Mr. Carr.*—6 will be good.

*President.*—In the next answer you say that first class Ranigunge coal costs Rs. 10-8-0 per ton, and the cost of coal varies as several qualities are used.

*Mr. Carr.*—Yes.

*President.*—What was the average cost for the coal used during the year?

*Mr. Carr.*—A little over Rs. 9.

*Mr. Ginwala.*—Your consumption of coal seems to be rather high.

*Mr. Carr.*—We have not been efficient in the steam consumption, and our outturn has been down. It would cost us no more coal if we are making another 1,000 tons.

*Mr. Ginwala.*—What is your lower outturn due to?

*Mr. Carr.*—It is due to what they call running slow. For the night shift you want, say, three men on a machine. If you have not the three then your outturn goes down, and that is what is happening over and over again, and that is why we are not making our 700 tons a month.

*Mr. Ginwala.*—It makes a lot of difference in the cost of production if you take one ton of coal more. I put it roughly at one ton, but it is considerably more than one ton as compared with all the others.

*Mr. Carr.*—The Home mills do with  $2\frac{1}{2}$  tons.

*Mr. Ginwala.*—I am talking of the Indian mills.

*Mr. Carr.*—I do not think we have ever been better than 5 tons when we were using Deshargar slack which we could get at 14 annas a ton in those days.

*Mr. Ginwala.*—It is unfortunate that the increase in consumption should take place with a rise in the price. Can you give us separately your figures of consumption for power and process (boiling, etc.)?

*Mr. Carr.*—We can only work it out roughly by saying we have 11 steam boilers and for working our grass boilers such and such is required.

*President.*—Could you give us just an approximate figure?

*Mr. Carr.*—I shall send you these figures.\*

*Mr. Ginwala.*—A rough and ready figure would do. Do you have to use filtered water?

*Mr. Carr.*—We take it out of the river, settle it in the tanks and we get it through gravel filters. We also use alumina.

*Mr. Ginwala.*—Does it cost you much?

*Mr. Carr.*—Last year it came to Rs. 3-0-6 per ton of paper.

*Mr. Ginwala.*—But that is a very big item. I thought you were favourably situated for water.

*Mr. Carr.*—When the water comes down in the rains it is coloured like coffee and it requires a lot of alumina to clean it.

*Mr. Ginwala.*—Do you have to filter it to the same extent as if it was required for drinking purposes: are you following the same process?

*Mr. Carr.*—About the same cleanliness is required, otherwise you would have a dirty paper.

*Mr. Ginwala.*—How far can you substitute electricity power for steam, for power and for manufacturing processes?

*Mr. Carr.*—We generate our own power.

*Mr. Ginwala.*—For boiling purposes you would still have to use steam so that there is not much scope for expansion of electricity.

*Mr. Carr.*—I do not know any.

*Mr. Ginwala.*—You are very fortunately situated about the coal: otherwise it would be a hopeless business.

#### V. MARKET.

##### A.—For Paper.

*President.*—Do you sell more paper up-country than you do at Calcutta?

*Mr. Carr.*—In Calcutta last year we sold 1,750 tons and up-country we sold 2,080 tons.

*President.*—That is a good deal less than your total output?

*Mr. Ginwala.*—And the rest to Government I suppose?

*Mr. Carr.*—1,865 tons to Government, 260 tons to Burma. Then we have odd markets 200 tons; Madras, the East Indian Railway and so on.

*President.*—That gives us some idea where your paper is going to. For any place up the railway from Ranigunge you have a decided advantage as compared with the imported paper and also over the Calcutta Mill?

*Mr. Carr.*—Yes.

*President.*—Of the up-country markets which is the most important?

*Mr. Carr.*—Delhi; it serves a large area.

*President.*—I suppose it is a distributing centre?

*Mr. Carr.*—Yes.

*President.*—In answer to Question 67 you say "The smaller newspapers use indigenous papers, but the larger papers require a class which cannot be made in India, being chiefly made of mechanical pulp." What class of papers do the smaller newspapers use; is it printing paper?

*Mr. Carr.*—No. 3 white and rather an inferior grade of that. It does not require to be very clean for a newspaper. No newspaper is clean really.

*President.*—Is it cheaper for them than the imported paper?

*Mr. Carr.*—It is cheaper than importing. These small newspapers don't want to carry stocks of paper as they have not a big capital, and that is why they take from us.

*Mr. Ginwala.*—Messrs. John Dickinson would sell a pound of paper if they can get the market!

*Mr. Carr.*—They sell a certain amount: they hold a certain amount of stock but we can generally keep our hold in that direction.

*B.—For Pulp.*

*President.*—In answer to Questions 68 to 72 you say "As we are not contemplating the manufacture of pulp for sale, we do not deal with this question except to emphasize the fact with regard to No. 70, that for certain classes of paper, sulphite wood pulp from abroad will be necessary however big the supply of bamboo pulp." Well, we were on that point this morning. Would what was said this morning lead to a modification of this answer or not? I am not quite sure what class of paper you had in your mind.

*Mr. Carr.*—High class bank paper. I don't think that answer would be modified.

*President.*—With regard to Question 66 you say in your answer, at the very end of it, that Government prices are 15 per cent. below market rates.

*Mr. Carr.*—That is the general rule.

*Mr. Ginwala.*—I suppose they buy in bulk?

*Mr. Carr.*—They are our big customers. We quote on this basis:—we get our telegraphic quotations from Home as to what the Home prices are and we quote right down to that. That is 15 per cent. below the market price here.

*President.*—Now that Government Departments have got to pay a duty will that make any difference to you?

*Mr. Carr.*—No.

*Mr. Ginwala.*—I think it was stated that they paid you more than the market price until the last conference.

*Mr. Carr.*—No.

*Mr. Ginwala.*—During the war they paid you controlled prices. Was there any change in the system in 1923?

*Mr. Carr.*—They were calling for tenders at Home as well.

*Mr. Ginwala.*—Was it not urged at the conference that the effect of that would be that you would get a lower price than you got before?

*Mr. Carr.*—My argument was that in calling for tenders they did not necessarily determine what was a fair price.

*President.*—I don't know of any reference to a fair price in the Stores rules.

*Mr. Carr.*—The question is whether you can get a fair price by calling for tenders.

*Mr. Ginwala.*—The reference there is 'price being not unfavourable.'

*Mr. Carr.*—By fair price I mean a fair return on an efficient cost of manufacture.

*President.*—I am quite sure that there is no reference whatever to fair price in the Stores rules and, if the Controller attempted to fix prices on that basis, he would be transgressing the rules.

*Mr. Carr.*—The discussion came on as to what was a fair price.

*Mr. Ginwala.*—The difference is this: they formerly asked for quotations. Some people refused to give them and they now call for tenders. The result is that in the tenders they get the proper rates.

*Mr. Carr.*—They get rates at which they can buy.

*Mr. Ginwala.*—Formerly they could not get these rates and therefore the paper manufacturers got better prices, isn't that so?

*Mr. Carr.*—I don't know that we had better rates. I don't think we did. These tenders came up once a year, sometimes after 3 years and it is difficult to remember exactly what the position was.

*Mr. Ginwala.*—Government give you 5 per cent. extra?

*Mr. Carr.*—Yes.

*Mr. Ginwala.*—That gives you a protection of 20 per cent. so far as Government are concerned?



*Mr. Carr.*—Yes.

*Mr. Ginwala.*—Did the newspapers use your paper during the war?

*Mr. Carr.*—One or two of them did and several of them tried to. They asked Government to commandeer the mills to enable them to get their supplies from us, but Government did not do so.

*Mr. Ginwala.*—Why do you make this remark "however big the supply of bamboo pulp" in answer to Question 72?

*Mr. Carr.*—So far as we know *badami* and white as being manufactured from bamboo pulp will not replace sulphite entirely.

*Mr. Ginwala.*—It would be a very small quantity, I suppose, about 5 per cent. or so of the demand. It would not be much more than that?

*Mr. Carr.*—It might be about 5 per cent. at present.

*Mr. Ginwala.*—That is for the whole industry or is it for your mill?

*Mr. Carr.*—For both.

*Mr. Ginwala.*—But for the whole industry? Supposing India wanted to manufacture all this paper. You say it could not manufacture except by importing some wood pulp.

*Mr. Carr.*—I don't think so.

*President.*—As things stand at present it would be difficult if not impossible?

*Mr. Carr.*—Yes.

#### VI. FOREIGN COMPETITION.

*President.*—In answer to Question 74 you say "The papers where we meet the keenest competition are good class Esparto grass papers and high class rag papers, also papers made from sulphite pulp only." Is there really a competition? I thought high class rag paper was a thing which you really could not produce?

*Mr. Carr.*—That is so.

*President.*—What I want to get at is, which of the papers you produce are subject to the keenest foreign competition?

*Mr. Carr.*—Good printing and writing papers.

*President.*—These are the two things where you feel the price is affected by something that is coming in?

*Mr. Carr.*—Yes.

*President.*—In answer to Question 75 you say "The foreign papers competing with our papers are chiefly made from wood pulp, Esparto grass and rags." In order to get at this a little more definitely let us take the classes of paper you mention in answer to Question 8. The paper that competes with your 'Printings'—of what material are they made?

*Mr. Carr.*—They are made from pulp and any higher grades from Esparto grass.

*President.*—The unbleached and the *badamis* are made from pulp?

*Mr. Carr.*—Yes, and browns entirely.

*President.*—And the 'Writings'?

*Mr. Carr.*—They will be grass paper chiefly or high class sulphite.

*President.*—Turning now to your answer to Question 76, you have given us a comparison of the prices in various years.

*Mr. Carr.*—It is extraordinarily difficult to do it. It is as near as we could get it.

*President.*—I do not understand why imported paper always gets a lower price than the locally made paper.

*Mr. Carr.*—We sell out of our godowns and we can sell in small quantities. A man has not got to place an indent. He can simply come and take what he wants. If he places an indent with an importer he has to wait for two or three months.

*President.*—Do not importers stock paper at all?

*Mr. Carr.*—They do stock it unquestionably. I think the chief explanation is that we can give rapid delivery for considerable quantities, whereas the importer is generally able to give small quantities only from stock and has to indent for larger quantities.

*President.*—These are Calcutta prices?

*Mr. Carr.*—Yes.

*President.*—Take your "Printings" for instance. If you realize 4 annas 6 pice in Calcutta, would you get a higher price for the same class of paper in Delhi?

*Mr. Carr.*—The same price.

*President.*—What I am looking at is in this way. What would actually be paid by a purchaser in Delhi as compared with a purchaser in Calcutta?

*Mr. Carr.*—He pays the same.

*President.*—Then what you get from sales in Delhi must be less than what you get from sales in Calcutta?

*Mr. Carr.*—Yes.

*President.*—It is a strange result; in Delhi you have an advantage over the importer but in Calcutta you have not got it? In Calcutta you are at a disadvantage because you have to pay freight from Ranigunge to Calcutta, whereas going upcountry the importer and the mills have to pay extra freight from Calcutta to Ranigunge and it seems paradoxical that you should be worse off in Delhi than in Calcutta. Is it regulated by custom or what is it. What is the explanation? Or is it the competition of the Lucknow mills?

*Mr. Carr.*—No, nor the latter; we ask the same price all over India.

*President.*—It is curious. In the ports I can understand it because there of course the imported paper finally regulates the price, but up-country I do not quite follow. However it is not a matter of great importance.

In answer to Question 77 you say "... we consider the information we act on is entirely reliable." I might explain what we were thinking of when we put that question. It was not in any way to challenge what you might say, but to ascertain from what sources the Board could get the information. Supposing any question came up about an off-setting duty as in the case of steel, it is very important to know where we can get accurate information of current prices from. You have got agents but we cannot get in touch with them in precisely the same way. Supposing any question was referred to the Board which necessitated their getting very accurate information as to prices, we must have some idea as to what was the best way of getting it. No doubt the importers might know, but they might not be always willing to tell us, because the enquiry would arise in circumstances in which the interest of the manufacturers would be on the one side and that of the importers on another.

*Mr. Carr.*—I see.

*President.*—In answer to Question 82 you have given some figures for the railway freight. I see you have given them from foreign ports of exportation. The figures in the 3rd column include your freight to India, does it not?

*Mr. Carr.*—That is right.

*President.*—In answer to Question 83 you have given rates per maund per mile both for small lots and wagon loads. Do you regard these rates as reasonable?

*Mr. Carr.*—Ycs.

*President.*—You have no complaint to make on that score?

*Mr. Carr.*—No.

*Mr. Ginwala.*—What we are trying to find out is to compare the price at which paper comes into the country and the price at which you can afford to sell. In the case of different steel products, for instance, we can tell pretty

nearly: their prices are comparable. But in the case of paper what do you suggest we should do?

*Mr. Carr.*—You can take the invoice cost.

*Mr. Ginwala.*—It is very difficult to say against what particular imported paper you compete. We must have some sort of general average price.

*Mr. Carr.*—It is very difficult.

*President.*—The point is this. The paper that is competing with your paper may be different from your paper and therefore you cannot say the price of one thing can be used against the other.

*Mr. Ginwala.*—Take the case of steel. We ascertained that the Tata Iron and Steel Company ought to get an average price of Rs. 180 per ton and we came to the conclusion that foreign steel came at such and such a price and we said if we were to give steel any protection, the difference between the two prices should be the measure of that protection. How are we going to apply that principle to paper manufacture? What domestic prices are we to compare with import prices?

*Mr. Carr.*—The only way would be to take the invoice of imported papers and see whether they are comparable and what they charge.

*Mr. Ginwala.*—Have you seen the classifications in the Sea Customs returns?

*Mr. Carr.*—Yes.

*Mr. Ginwala.*—Can we adopt these classifications of paper?

*President.*—If you could at any rate give us the range of prices for white printings, and tell us what would probably be the maximum price and what was the minimum.

*Mr. Carr.*—Yes.\*

*Mr. Ginwala.*—We are confronted with another difficulty but we are trying to find out the general average price.

*Mr. Ginwala.*—Now can you give us the amount of duty you suggest on the foreign article entering the country should pay? You are in the business. You can tell us how to get at the measure of protection on the principle I have stated. To my mind it is a real difficulty.

*Mr. Carr.*—Take a popular imported paper and get the English and Continental prices and our prices. I can give you two or three samples of that kind. Would that establish the difference?

*Mr. Ginwala.*—Supposing you manufacture six kinds of paper and there are a dozen kinds of paper which compete against you; if you get the average price of the dozen articles and the average price of your six kinds, then we might get some idea, but the things must be comparable. That is the point. We can say what price you ought to get—that we can determine—but to say what duty would be required to make up the difference might be an exceedingly difficult question. You can think it over and let us know. Or, the Paper Association or somebody else will have to explain to us how this is to be accomplished. That is the principle that was accepted, as you know, in the case of the steel industry.

*President.*—It is a curiously complicated case because an increase in the cost of any one kind of paper would probably be met by purchasers using paper of a lower quality.

*Mr. Carr.*—In that case the difference to be established would be about two or three pices—just enough to secure the buyers. What I mean is what the limits the foreign paper can sell at, we cannot say. All that we know is that they can sell two or three pices below us.

*Mr. Ginwala.*—We have not got the measure of protection. How are we to determine that?

*Mr. Carr.*—In my answers to Questions 79 to 81, I have said that it is extremely difficult.

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\* Not received.

*President.*—You were on the question of dumping. Whether there is dumping or not, our problem remains still the same, namely what is the difference between the price which gives the Indian manufacturer a fair profit and the price at which foreign paper is coming into the country.

*Mr. Ginwala.*—You complain of the unfair conditions. You want to equalise the conditions between you and the foreign manufacturer. If the manufacturer can sell his paper in this country at £10 and you cannot produce under £12, then we can say that the measure of protection ought to be £2. We can get your figure of £12 but we cannot get the foreign manufacturer's price. How are we to determine what amount of protection will meet the case?

*Mr. Carr.*—The 15 per cent. that you have given us does not enable us to do it.

*Mr. Ginwala.* We do not know whether it does or does not. We may give you 50 per cent. and yet it may happen that you don't get any benefit out of it, because the conditions may not be equalised, so that we should like you very much to suggest to us as to what we are to do.

*Mr. Carr.*—Yes.

*President.*—With regard to your answer to Question 79, I understand these are the reports you got from your experts. Can you give any more instances of this kind? You have given an instance of a Trade Review.

*Mr. Carr.*—There is another extract from the World's Paper Trade Review, dated May 23rd, 1924. "General speaking the majority of British mills are selling at prices which show little or no profit, but so long as there are not sufficient orders to go round, they cannot increase them to a level which is justified by the increasing cost of material and labour."

*Mr. Ginwala.*—That is of course a comment made by the correspondent or the writer. Have you got instances in which the Director of a company has made a speech at an annual meeting saying that no dividends can be paid because they had to sell below cost price?

*Mr. Carr.*—I have not got instances of that kind. I have got extracts from Reviews. The Paper Trade Review of the 6th June has the following:—

"It is not only British paper-makers who are dissatisfied with the level of paper prices. Swedish producers are equally concerned. The price movement in esparto papers is gaining ground and we hear of further Mills having arrived at the decision that writing papers at the old figures are unremunerative. As yet, there has been no corresponding action that we know of in the Woodfree Section, but the dissatisfaction with extant prices is deepening."

*Mr. Ginwala.*—Is this question of freight (see your Answers to 82 and 83) a really serious one in the case of the finished article? Does it make very much difference?

*Mr. Carr.*—As far as I know, these freights are fair in comparison with what other commodities are paying to railways.

*Mr. Ginwala.*—Evidently our Question 85 has failed in its purpose. The idea was to get the money value of every disadvantage as far as possible.

*Mr. Carr.*—It is almost impossible to answer you in any other way. It is very difficult to put it in rupees, annas and pias. Take the recovery plant, for instance. Something goes wrong with the machine. The manufacturer at Home rings up the expert and he comes round and sets it right. Here it is not so. We try to tackle it. If we don't succeed, we write home. To put that in rupees, annas and pias is extraordinarily difficult.

*Mr. Kale.*—You say in answer to Question 80 that the competition that you have to meet is the keenest in Bombay, Madras and Calcutta. I can understand that it is so in Bombay and Madras. But what about Calcutta? From the figures that you have given in answer to Question 76, it will be seen that in Calcutta you are getting better prices than the foreign manufacturer. How can you say that you are worse off than?

*Mr. Carr.*—We say that competition is very keen in those places. It is natural in the seaports where the foreign manufacturers land their goods straight in the market.

*President.*—You don't seem to get any higher prices in Delhi?

*Mr. Carr.*—We get lower prices in Bombay and Madras than we do in Calcutta or in Delhi.

*President.*—But is it true then that competition is keener at Calcutta than it is at Delhi? You are getting a smaller price at Delhi, at any rate a smaller amount of the price paid at Delhi reaches your pocket.

*Mr. Carr.*—In Delhi, for instance, it is sold at annas 4-6 per lb.; but in Bombay it is sold at four annas.

*President.*—The prices are not the same then at Delhi as they are at the ports?

*Mr. Carr.*—Because foreign papers are cheaper in the ports.

*Mr. Kale.*—On what does the price in Delhi depend? In Calcutta, I understand that the competition between the imported and the domestic paper determines the price. You say that for printings you get As. 4-6 and the importer gets As. 4-3. You have also told us that the importers would not be content with As. 4-3 at Delhi and that he would want something higher.

*Mr. Carr.*—Yes.

*Mr. Kale.*—Why can't you get something higher?

*Mr. Carr.*—We do get As. 4-6 in Delhi, but in Bombay we get As. 4-0.

*President.*—In Calcutta also you get the same price. Is the competition the same or is it due to your reputation and business connections?

*Mr. Carr.*—Yes, traditions of the business and business connections. We have carried on for a great many years. One of the ways is to get these dealers to deal only in indigenous paper. We give them a bigger discount for that. If we want to sell in Bombay, we have to take the best price we can get.

*Mr. Kale.*—You have not yet explained how the competition is keen in Calcutta. In Calcutta you get a price of As. 4-6 per lb. while the foreign manufacturer gets only As. 4-3. On the figures that you have given you are getting more than the foreigner.

*Mr. Carr.*—At the moment, yes. In 1922 we were getting the same as the foreign manufacturer.

*Mr. Kale.*—Look at the whole period from 1912 onwards.

*Mr. Carr.*—In Calcutta, we have got a better price.

*Mr. Kale.*—You are better off in Calcutta and you ought to strike-off the sentence relating to Calcutta. In Calcutta you have no complaint to make. These figures, I take it, are correct?

*Mr. Carr.*—As far as I know, these figures are correct. We always get a higher price in Calcutta.

*Mr. Kale.*—You told us sometime ago that you sold about 1,800 tons in Calcutta.

*Mr. Carr.*—Yes.

*Mr. Kale.*—If you get the advantage over the foreign manufacturer in the matter of 1,800 tons in Calcutta, that means a large amount. 1,800 tons is a fairly large proportion of your total output?

*Mr. Carr.*—There is the discount to be paid which makes the difference. Our maximum discount is 14 per cent.

*Mr. Kale.*—The foreign manufacturer has to pay the same discount.

*Mr. Carr.*—I don't know what exactly he has to pay. I know that competition in Calcutta is very keen. Our stocks are now mounting up. We cannot sell any quantity with the three pice increase. That is where the competition comes in. I have not got the figures for a large number of

years. Our Calcutta sales are falling off. I know at the present time they have considerably dropped.

*Mr. Kale.*—1,800 tons is a sufficiently large amount?

*Mr. Ginwala.*—I don't know whether we have made it quite clear to you. We want the average price realised by you.

*Mr. Carr.*—I can give you that.\*

*President.*—Is the discount deducted from the prices that you have given, or is it included in them?

*Mr. Carr.*—This is the average return to the mill.

*President.*—That is to say, the discount is cut off from it.

*Mr. Carr.*—This is the net return. The average total cost was Rs. 510-15- for 1923, and the average realised price for the same year was Rs. 545-4-10.

*President.*—Unless these figures tally with the figures that you have already given in the forms, they would not help us very much.

*Mr. Carr.*—The difference lies between works cost and cost including Head Office, etc. I have got here figures, for three years, of our average realised prices:—

	Rs. A. P.	
1923	545	4 10
1922	608	10 6
1921	836	2 8

*President.*—Have you got figures for 1914?

*Mr. Carr.*—No.

#### VII.—EQUIPMENT.

*President.*—In your answer to Question 92, you say "Methods of paper-making have remained unaffected, except in small particulars where improvement is always taking place, during the past 10 years." I thought that the suggestion that a paper mill put up some 8 or 10 years ago would be a second class mill now, came from the Papermakers' Association to the Fiscal Commission.

*Mr. Carr.*—I think that it will be in Sir Willoughby Carey's evidence.

*President.*—You don't agree with that opinion?

*Mr. Carr.*—No.

*Mr. Ginwala.*—In the paper-making plant, there may not have been many improvements, but in the pulp plant there have been a lot.

*Mr. Carr.*—One can improve a mill by adding to it, but with regard to the process, as far as I know, there have been only small improvements. I went over one or two mills at Home last year which have got up-to-date machinery, but I did not see any marked improvements.

*President.*—What it comes to is this. Taking a British paper factory on the basis of pre-war prices, would the cost of manufacture to-day have appreciably decreased? That is to say, supporting the Home manufacturer paid the same wages as he did in 1914 and got his materials at the same price as in 1914, would he not be able, owing to improved processes, to make any substantial saving in his cost?

*Mr. Carr.*—I should not think so.

#### VIII.—CAPITAL ACCOUNT.

*President.*—I see from your answer to Question 103 that you have spent very nearly Rs. 14 lakhs on plant and machinery.

*Mr. Carr.*—That is right.

*President.*—Out of a total Rs. 27½ lakhs—which is the original cost.—you have spent nearly 14 lakhs since 1917?

*Mr. Carr.*—Yes.

\* Not received.

*President.*—I am a little surprised that you think that the present day cost of plant and machinery would be as high as Rs. 45 lakhs, seeing that you have spent quite a considerable sum in the last few years.

*Mr. Carr.*—The Gwalior acquisition was an extraordinarily cheap one.

*President.*—That has got to be brought out. That figure of Rs. 45 lakhs—the present day cost of plant and machinery for about the same output as yours—is just a statement and there is nothing to confirm it. Unless it is explained, it is not consistent with the heavy purchases made since 1917. Are you in a position to tell us as regards the Gwalior apparatus that was taken over whether you took it over at a favourable price or something of that kind?

*Mr. Carr.*—I had better give you a figure. When the Gwalior Company liquidated, this company took it over at Rs. 3 lakhs.

*President.*—The figures that you have given in answer to Question 100 include that?

*Mr. Carr.*—Yes, and the machinery I suppose is worth two lakhs more than that.

*Mr. Ginnala.*—What was the capacity of that mill?

*Mr. Carr.*—Before, its capacity was 110 tons, and its present capacity is I think 140 tons, a month.

*Mr. Ginnala.*—With the alterations you have made?

*Mr. Carr.*—Yes.

*Mr. Ginnala.*—Is this for one machine with the pulp plant?

*Mr. Carr.*—Yes. We have got beaters, breakers, etc., at Ranigunge.

*President.*—Can you tell us how you arrived at your estimate of Rs. 45 lakhs for plant and machinery?

*Mr. Carr.*—I am afraid I have not got the details with me.

*President.*—I don't think that it is necessary that we should have the details, but the point is whether it is based on recent estimates actually obtained in view of the possible expansions or improvements.

*Mr. Carr.*—Yes, it is.

*President.*—On what date were the estimates prepared?

*Mr. Carr.*—About a year or 9 months old. May I say (about the cost of Rs. 27½ lakhs) that our plant and machinery, if purchased to-day, would cost much more.

*President.*—Only those parts purchased before 1913. At the same time you may have to take off a good deal out of the purchases of 1920-21. If you actually imported the machinery in 1920-21, you probably placed the order in 1919. Prices were higher then, so that there is something to set off against the unquestionable increased cost of anything which you purchased before the war.

*Mr. Carr.*—That is so.

*President.*—This plant for which you obtained estimates, was it the same type of plant?

*Mr. Carr.*—The two machine mill estimates were made for us sometime back when we thought we might have another paper mill.

*President.*—In answer to Question 97 you say "in addition Rs. 3,00,000 remain in hand to cover the completion of improvement and extensions." I do not quite see how that comes in in connection with depreciation.

*Mr. Carr.*—We probably did not get the purpose of the question.

*President.*—I gather that, when you spend this Rs. 3 lakhs, you may reduce the value of your plant in your books by that sum, but you have not done so yet?

*Mr. Carr.*—We have not done that.

*President.*—On page 12 I see that in the war years 1917, 1918, 1919 you were able to make pretty handsome distributions. The Couper Mills did

the same. The question is always raised whether it would not have been more prudent to make larger allocations for reserve.

*Mr. Carr.*—It was done in our shareholders meeting. It was pretty hard to make it as low as that.

*President.*—Still that is a point which has got to be taken into consideration.

*Mr. Ginwala.*—I do not follow these percentages.

*President.*—These percentages for some years cannot be right taking the capital of Rs. 8,88,000. Therefore we want to know when the capital was increased to Rs. 8,88,000. Apparently up to 1916 it was Rs. 4 lakhs and this apparently went up to Rs. 5 lakhs in 1917 and Rs. 6 lakhs in the next three years, and the last change was apparently made in 1921.

*Mr. Carr.*—Yes.

*Mr. Ginwala.*—With regard to equipment I would put a general question. Do you claim that the cost of production has not gone up in any way in consequence of any defective equipment apart from the coal?

*Mr. Carr.*—No. I do not think there would be anything except coal and recovery plant. These two were unsatisfactory.

*Mr. Ginwala.*—As for the rest, you claim it is as good as any reasonably equipped plant?

*Mr. Carr.*—It is as good as any good mill at Home.

*Mr. Ginwala.*—Is your plant as well equipped as plants in the other mills in India?

*Mr. Carr.*—I have never been to Titaghur. I imagine one of their mills is better than ours. Ours was an old cement work originally.

*Mr. Ginwala.*—Which one of them?

*Mr. Carr.*—Kankinar is a good one.

*Mr. Ginwala.*—You spent a lot of money in the years 1917-1924. Has it made much difference in the cost of production?

*Mr. Carr.*—It lowered our cost of production by putting up our outturn when labour intervened and upset it. All this money has put us up from about 542 tons to 670 tons a month capacity.

*Mr. Ginwala.*—With the alterations that you have made to the plant now have you got any plant which you can use for bamboo pulp?

*Mr. Carr.*—No.

*Mr. Ginwala.*—The paper machinery is the same.

*Mr. Carr.*—The machinery is the same in essentials. Take your digestors for instance; you have to digest bamboo at about 140 lbs. pressure, whereas ordinary grass would require about 60 lbs. and the digester would burst under that pressure. We have one department which boils rags; that is of one pressure and another department which boils grass which requires quite another pressure. There is no reason why without any great expense we cannot reduce bamboo.

*Mr. Ginwala.*—What about crushing?

*Mr. Carr.*—Crushing does not present any great difficulty. Experiments were carried out with bamboo with sugarcane crushers. It does not present much difficulty.

*Mr. Ginwala.*—May I take it that a change from grass to bamboo will not be such an expensive proposition?

*Mr. Carr.*—No.

*Mr. Ginwala.*—Have you investigated it?

*Mr. Carr.*—Our investigations up-to-date have been in the lines of working a bamboo pulp mill and that we should put the half-stuff into the Ranigunge.

*Mr. Ginwala.*—Your valuation of your plant and buildings comes to Rs. 27,64,611 and Rs. 16,69,214 respectively. Is that the book value?



*Mr. Carr.*—That is what we have paid—the original cost.

*Mr. Ginwala.*—That has depreciated by the figures given in answer to Question 97?

*Mr. Carr.*—Yes.

*Mr. Ginwala.*—The original value may be taken at Rs. 43 lakhs and you then write off this depreciation and you get the figures given in answer to Question 96. You have added another Rs. 10 lakhs or more. If you say that your block value is now this, that is practically less than what you put into machinery in the last five years.

*Mr. Carr.*—That is Rs. 7.53 lakhs.

*President.*—When did that writing off take place? You have spent close on Rs. 14 lakhs in the last seven years on plant and machinery. Suppose your machinery block stood at nil on that date, you have already written off all the new purchases. If so, they have got to go into the block account.

*Mr. Carr.*—They are written down as they are going to block.

*President.*—In the case of the Gwalior plant there was a double process. First you got it cheap and then you wrote it down.

*Mr. Carr.*—We made enough to write off the price of the Gwalior plant before we purchased it.

*Mr. Ginwala.*—Did you write it down in 1923?

*Mr. Carr.*—In 1921 we wrote off Rs. 3 lakhs for depreciation in the half year and we wrote off Rs. 5½ lakhs as we added to the plant. What we actually did was, out of the profit we made a reserve for extension and improvement of the plant. We transferred from that fund to depreciation and that is what it is referred to here as Rs. 3 lakhs, but we hold Rs. 3 lakhs against improvements and extensions and as the job is completed we will wipe out that as depreciation.

*Mr. Ginwala.*—Can you let us have a copy of your balance sheets?

*Mr. Carr.*—I shall get you copies from 1920 onwards and also of the first half year of 1914.

*Mr. Ginwala.*—You have written down your capital to the value of your block?

*Mr. Carr.*—We had to write down, to keep the Company alive.

*Mr. Ginwala.*—It does not correspond to your block value for your block value is less.

*Mr. Carr.*—Our block value is less. We reduced our block value when we reduced our capital, but that is included in the depreciation shown in answer to Question 98. I have tried to explain that.

*Mr. Ginwala.*—When was this debenture loan raised?

*Mr. Carr.*—1892 and increased in 1904.

*Mr. Ginwala.*—That is why you got it at 6 per cent. you would not get it at 6 per cent. now.

*Mr. Carr.*—I am afraid not.

*Mr. Ginwala.*—How would you redeem your debentures?

*Mr. Carr.*—We have Rs. 3,57,000.

*President.*—In reply to the question “what further capital would it be necessary to raise in order to carry out any scheme of replacement or extension of plant which the company contemplate?” you say “no further capital is required.” Is that because you have not got any scheme?

*Mr. Carr.*—No.

*Mr. Kale.*—Have you not got any dividend equalization fund?

*Mr. Carr.*—Yes: it is now down to Rs. 33,000: we have drawn upon it to pay the preference dividend.

*Mr. Kale.*—That was rather too small: you have been paying 52 per cent. for nearly four years, 25 per cent. for the fifth. I thought you might have laid by something to the credit of that fund.

*Mr. Carr.*—I am afraid that shareholders of those years were not so keen on it. Investors are keen on it no doubt.

*Mr. Kole.*—But these are the same shareholders who are now claiming protection. If you had put down a certain amount on the years when you made good profits—certainly something more than 6 per cent. was necessary in those years,—then you would have been able to lay by a sufficiently large amount—say 15 or 20 per cent.

*Mr. Carr.*—We spent about Rs. 14 lakhs on improvements and put by several lakhs to reserve and equalisation fund. The shareholders want something.

*President.*—How far were the shareholders of those years the same people whose capital was cut down in 1904?

*Mr. Carr.*—Not a great many.

### Continued on July 4th.

*Mr. Carr.*—Before you begin I wish to make a statement. I have got here a representation of Messrs. John Dickinson & Co. to yourselves, and I notice that there is a deliberate misstatement which would prejudice our case before you, and that is with regard to the ability of the Indian mills to meet India's requirements. They say that, owing to the inability of the Indian mills to manufacture more than a confined range of qualities, the major portion of the provincial Government requirements are met from England and the Continent. That is absolutely untrue. The Bihar and Orissa contract has gone to the Upper India Conper Mills; the Burma Government contract has been divided, as we know, between the Titaghur Mills and the Bengal Paper Mills; of the Government of India contract, which of course includes the United Provinces, the Central Provinces and the Punjab Governments, 5,489 out of 6,000 tons have gone to the Indian mills. For years we have met the major requirements of the Government of India and the provincial Governments. The Bombay Government contract may have gone Home; we have not heard about that. I just want to make that point because I do feel that that is one of our claims which is the most important in this that our industry is important to the country.

*Mr. Ginwala.*—How did you get a copy of this?

*Mr. Carr.*—Our people got it from the bazar in Calcutta.

*Mr. Ginwala.*—That is to say, some sort of propaganda is being carried on?

*Mr. Carr.*—Yes.

*Mr. Ginwala.*—It was not quite clear to me what you did with your war profits. I may take it that a good deal of these profits were carried to the reserve which was afterwards used for the purchase of this machinery?

*Mr. Carr.*—That is right.

*Mr. Ginwala.*—In your case the 52 per cent. by way of percentage looks rather high, but having regard to the total capital that was entitled to earn dividend the amount shown is not very big.

*Mr. Carr.*—No.

*Mr. Ginwala.*—How much have you distributed by way of dividend and how much have you carried forward to the reserves?

*Mr. Carr.*—Something like Rs. 20 lakhs to the reserve as opposed to distributing 12 lakhs.

*Mr. Ginwala.*—How did you spend the reserve?

*Mr. Carr.*—We kept the whole in cash or spent it on machinery.

*Mr. Ginwala.*—Of course, looking at your dividend list it looks as though you have not done badly: you have been able to give dividends since 1906.

*Mr. Carr.*—On reduced capital. We wrote our ordinary capital down by 75 per cent. and our preference by 50 per cent.

*President.*—You were paying dividends at 2 per cent. and  $1\frac{1}{2}$  per cent. from 1906 onwards on the original value?

*Mr. Carr.*—That is it.

*Mr. Ginwala.*—This average that you have given in answer to question 105 of  $5\frac{1}{5}$  per cent. is with regard to your actual capital now, is it not?

*Mr. Carr.*—That is on our reduced capital, this  $5\frac{1}{5}$  per cent., excluding the war years.

*President.*—Supposing the capital had remained at its original figure. Taking it at its original figure all along on that basis what does the average dividend amount to?

*Mr. Carr.*—I cannot say without calculating, but the amount represented in the dividend is shown.

*Mr. Ginwala.*—That is it. You are rather fortunate. Are these cumulative shares?

*Mr. Carr.*—Yes. They were 6 per cent. and when the capital was reduced they were raised to 7 per cent.

#### IX. COST OF PRODUCTION.

*President.*—We come now to the question of cost of production, but here again the question comes up as regards two of the answers in 109 and 111 which you ask should be treated as confidential.

*Mr. Carr.*—In view of what you were saying yesterday I withdraw my objection to 109 entirely. As regards 111 I would rather wish not to publish that if it could possibly be done.

*Mr. Ginwala.*—This is rather important.

*President.*—Let me put the question to you in this form. Assuming your works cost at this figure and then taking certain figures, overhead and manufacturers profit, you get a certain total and that is, so to speak, the basis of all questions.

*Mr. Carr.*—All right, I withdraw.

*Mr. Ginwala.*—That certainly facilitates our enquiry a good deal.

*President.*—We are very much indebted to you. Let us turn now to Forms I and IV. The first entry in Form IV, I think, is taken directly from the form which we sent out, but I think in the first entry the heading is not correct. You mean perhaps primary raw material?

*Mr. Carr.*—I think it should be Primary Raw Materials.

*President.*—In 1923 your primary and auxiliary raw materials together came to Rs. 214 per ton of paper.

*Mr. Carr.*—Yes.

*President.*—On the other hand in your estimate in the answer to question 111, you put down your raw materials at Rs. 250.

*Mr. Carr.*—That is on account of the big reduction in purchased pulp in future.

*President.*—Therefore it comes to this that you can manufacture paper a good deal more cheaply by using more pulp than you do. Is it not in your interests as manufacturers to use as much pulp as possible?

*Mr. Carr.*—At one time it was. Not at the moment.

*President.*—Surely these figures, with the explanation that you have just given, prove it.

*Mr. Carr.*—Our costs as shewn in our answer to question 111 would be Rs. 300—Rs. 250 plus Rs. 50 for purchased pulp.

*President.*—On the three entries together you do make a small reduction.

*Mr. Carr.*—Yes.

*President.*—What it comes to is this. You expect to be able to reduce your consumption of imported pulp by about 50 per cent.?

*Mr. Carr.*—Yes.

*President.*—Under power and fuel you have shewn a substantial reduction of about  $\frac{1}{3}$ rd as compared with your 1923 figures.

*Mr. Carr.*—Because our coal had been very bad.

*President.*—Do you expect cheaper coal, or better coal, or are you getting more use out of coal?

*Mr. Carr.*—Cheaper coal and greater efficiency. We have built a new chimney and it is already having effect.

*President.*—Would that mean a reduction of the amount of coal in use?

*Mr. Carr.*—Yes.

*President.*—To what extent you expect to bring down the cost?

*Mr. Carr.*—20 per cent.

*President.*—At present it is  $6\frac{1}{2}$  tons?

*Mr. Carr.*—That is what it should be.

*President.*—In 1923 was it  $6\frac{1}{2}$  tons?

*Mr. Carr.*—What I said was necessary. We actually used about  $7\frac{1}{2}$  tons.

*President.*—You hope to be able to come down to 6 tons.

*Mr. Carr.*—Yes.

*President.*—You also expect a reduction in the price, do you?

*Mr. Carr.*—Yes.

*President.*—Then under repairs and maintenance of buildings and machinery you expect a fall. Is that chiefly owing to the bigger output?

*Mr. Carr.*—Partly that, and partly prices are falling a little.

*President.*—For spare parts and things of that kind?

*Mr. Carr.*—Chiefly, things such as wires, felts, etc.

*President.*—They are for replacing your apparatus. They may not be spare parts technically but they are analogous.

*Mr. Carr.*—Yes.

*President.*—What is the figure against General services, etc. One figure has been typed over another.

*Mr. Carr.*—Rs. 13.

*President.*—You expect under Miscellaneous a drop from Rs. 10 to Rs. 6, but you don't apparently anticipate a corresponding drop under General services, etc.?

*Mr. Carr.*—No.

*President.*—Is there any special reason why the one should drop and the other not?

*Mr. Carr.*—We have given up riot insurance for the time being. It costs us a lot.

*Mr. Ginwala.*—You have now the Workmen's Compensation Act.

*Mr. Carr.*—Until they learn enough to put in claims I don't suppose it would cost us much.

*Mr. Ginwala.*—They would soon be taught.

*Mr. Carr.*—It won't cost us more than it does now. The general basis on which we give compensation is higher than it costs us in insurance. We always find jobs for those who get accidents. They are able to do some light job.

*President.*—In your answer to question 111, are you anticipating any greater output than you got in 1923?

*Mr. Carr.*—We are.

*President.*—If so, I should expect a reduction in the General service, etc. Is not that inevitable? It is an entry that must vary with the output.

*Mr. Carr.*—We expect rents will rise.

*President.*—They must come under Miscellaneous.

*Mr. Carr.*—Yes, I beg your pardon. It is packing which is one of our big items.

*President.*—Packing ought not to cost you more per ton.

*Mr. Carr.*—It would cost just as much.

*President.*—I should have thought that there should be a fall on an item of that kind. That includes your management expenses at the Mills, does it not? All the higher paid establishments which are not included under labour, would come in there.

*Mr. Carr.*—Then we shall have to pay more for a new manager, I am afraid.

*President.*—What I am more concerned with is this. On what output was this estimate given in answer to question 111 prepared?

*Mr. Carr.*—It would probably be 650 tons a month.

*President.*—In that case I should expect that your mill labour would have fallen more than you have shewn. With the increase of 20 per cent. in your output, I should expect that the figure would fall more heavily.

*Mr. Carr.*—I have not got the figures by me here.

*President.*—I should be quite prepared to accept if you would say "Our output is so much but the conditions of labour being what they are, we are not prepared to pay more." But if you are going to get that output, I don't see how you are going to do it except by much greater efficiency of labour. In that case the cost of labour ought to go further down.

*Mr. Carr.*—Quite.

*Mr. Ginwala.*—About Form IV; I should like to amplify it a bit in the examination. I think that first of all you had better correct the first entry in this form by substituting "Primary raw materials" for "Manufactured bleached pulp."

*Mr. Carr.*—Yes.

*Mr. Ginwala.*—What I want to find out is, what is the average cost of your primary raw materials as we have defined them?

*Mr. Carr.*—Our grass per ton is Rs. 74-8-0.

*Mr. Ginwala.*—Are we right in taking that the average yield of all your raw materials is 40 per cent.?

*Mr. Carr.*—It is 34 per cent. for grass and for others 40 per cent. On the average it would not be more than 37 or 38 per cent.

*Mr. Ginwala.*—For pulp?

*Mr. Carr.*—87 per cent.

*Mr. Ginwala.*—Some claim 35 to 100 per cent.

*Mr. Carr.*—They are very fortunate.

*Mr. Ginwala.*—In the case of local pulp that you are getting you don't get the full average because there is no time for it to dry?

*Mr. Carr.*—No time for it to absorb moisture.

*Mr. Ginwala.*—From bleached pulp to paper is there much wastage?

*Mr. Carr.*—Very little.

*Mr. Ginwala.*—The point I am driving at is, if you manufacture your pulp locally or buy it locally, you will save pretty nearly that wastage of 12 per cent.

*Mr. Carr.*—We don't pay for that 12 per cent.

*Mr. Ginwala.*—But you do. It costs you so much more.

*Mr. Carr.*—If you pay £10 for 95 per cent. dry, you will pay proportionately less for 87 per cent. dry. It is sold on the basis of the dry certificate.

*Mr. Ginwala.*—You have stated somewhere in your written statement that you want 1·20 tons of purchased pulp for one ton of finished paper. The wastage in that case is  $\frac{1}{5}$ th of a ton.

*Mr. Carr.*—Yes.

*Mr. Ginwala.*—My point is that if you manufacture pulp yourself or buy it locally, whether wet or dry, there won't be the wastage of  $\frac{1}{5}$ th of a ton.

*Mr. Carr.*—There would be. The price would be different. If we buy wet pulp, we would want 2 tons.

*Mr. Ginwala.*—But it would be very much cheaper. There is a certain amount of wastage in the imported pulp which you will not have if you use local pulp.

*Mr. Carr.*—I don't quite follow.

*President.*—What Mr. Ginwala means is this. When you are using manufactured pulp, if you compare its cost with the cost of what you yourself could manufacture or buy locally, you have got to make allowance for the proper wastage, in which case what you are going to get in value is lost in tons. In any comparison of prices that must be taken into account. It all depends on what the prices are.

*Mr. Ginwala.*—You have not given the prices of your pulp. We cannot get much further on that basis. But as a matter of fact there will be more saving if you use locally made pulp for the imported pulp.

*Mr. Carr.*—I don't get it. Our wastage won't come up in the prepared pulp, but it would have been already taken into account in the question of raw materials.

*President.*—Do you mean that it is allowed for right through?

*Mr. Carr.*—Yes.

*Mr. Ginwala.*—The value of your pulp is only 20 per cent. of your total works cost.

*Mr. Carr.*—Yes; in 1921 when pulp was expensive it was a third.

*Mr. Ginwala.*—If it is  $\frac{1}{5}$ th, the total quantity of pulp used is about a third of the raw materials.

*Mr. Carr.*—In weight, yes.

*Mr. Ginwala.*—Now with regard to auxiliary raw materials: How are the results obtained here comparable with results obtained in foreign countries? Do you use more bleach?

*Mr. Carr.*—Bleach we have to get from abroad. The two things which we have got to get from abroad are China clay and bleach. The rest we can get here.

*Mr. Ginwala.*—Do you obtain in your works the same results as they obtain in factories at Home?

*Mr. Carr.*—Not quite, because the chlorine in bleach evaporates.

*Mr. Ginwala.*—You ought to get 35 or 36 per cent.

*Mr. Carr.*—It runs down with the heat.

*Mr. Ginwala.*—How much does it run down?

*Mr. Carr.*—With a bad consignment, we have gone down to 25 per cent. With one big consignment, we had to throw the whole lot into the river because the chlorine had gone out. That is simply a matter of deterioration through heat and poor quality powder.

*Mr. Ginwala.*—What is the average available?

*Mr. Carr.*—80 to 92 per cent.

*Mr. Ginwala.*—You are worse off by 27 to 32?

*Mr. Carr.*—On the basis on which we buy we are getting no loss. We have regular shipments fortnightly. I could not tell you whether it is 37 or 33.

*Mr. Ginwala.*—Then, generally, you claim that you don't use more chemicals per ton than up-to-date factories?

*Mr. Carr.*—I think so.

*Mr. Ginwala.*—There is nothing in the process which involves more wastage here than at Home except what you have pointed out?

*Mr. Carr.*—With that exception, there is nothing else.

*Mr. Ginwala.*—With regard to mill labour: I think that in another part of the statement you have given the Indian labour as Rs. 18 a ton for 1911 and Rs. 43-13-9 for 1923. Would the rest be European labour?

*Mr. Carr.*—That is right.

*Mr. Ginwala.*—It is a fairly big proportion; you have 44/70.

*Mr. Carr.*—It is 44/26. It includes the salaries of manager and salesman.

*Mr. Ginwala.*—That is a fairly large proportion. Rs. 24 a ton is a substantial figure for European labour only.

*Mr. Carr.*—Yes.

*Mr. Ginwala.*—In steel, it does not come to more than three or four rupees a ton. I forget what the exact figure is. Why are the figures under ordinary repairs so high as Rs. 42?

*Mr. Carr.*—That includes copper wires, etc. They are what are called furnishings of the machine. They wear out in two or three weeks and have to be replaced.

*Mr. Ginwala.*—Is it due to any defective machinery, or is it due to the conditions under which the machinery is worked?

*Mr. Carr.*—Just under normal conditions.

*Mr. Ginwala.*—Is it a continuous process?

*Mr. Carr.*—We knock off 24 hours a week.

*Mr. Ginwala.*—Do you work six days in a week?

*Mr. Carr.*—Yes.

*Mr. Ginwala.*—Are there three shifts?

*Mr. Carr.*—Only two shifts.

*Mr. Ginwala.*—I don't suppose that you are allowed to work 12 hours a day.

*Mr. Carr.*—They take leave during the shifts.

*Mr. Ginwala.*—But then you must keep a lot more men in that case.

*Mr. Carr.*—We have got double staff. We have in all 1,200. They come on two shifts. There are night workers and day workers.

*Mr. Ginwala.*—But you cannot work them for more than 60 hours a week now.

*Mr. Carr.*—That is right. They take leave during the 12 hours. They come at six o'clock and go at 9 for an hour and come back.

*Mr. Ginwala.*—When these people go, who take their places?

*Mr. Carr.*—We keep two or three people. Out of a gang, 7 will go and 3 will stay and when they return, these three men will go. We don't have a full gang of 10 except for 7 to 8 hours in a day.

*Mr. Ginwala.*—8 hours shifts would have been simpler.

*Mr. Carr.*—They don't like it. We would have another strike if we did it.

*Mr. Ginwala.*—You call "wires," etc., repairs. They are hardly repairs.

*Mr. Carr.*—Current repairs and maintenance.

*Mr. Ginwala.*—How much does maintenance cost?

*Mr. Carr.*—Furnishings, etc., cost Rs. 18 a ton, and repairs come to Rs. 11-8-0.

*Mr. Ginwala.*—The rest is maintenance.

*Mr. Carr.*—Then there are stores that would come to Rs. 4-8-0 a ton.

*Mr. Ginwala.*—Rs. 11 a ton is a big sum for repairs.

*President.*—It is only 2 per cent.

*Mr. Carr.*—Belting, etc., come in here.

*Mr. Ginwala.*—With regard to question 111 we have not got comparable figures now.

*Mr. Carr.*—I have divided that Rs. 250 into small items in case you want it.

*Mr. Ginwala.*—This figure of your primary raw materials remains the same.

*Mr. Carr.*—Yes. When we come to boiling per ton of paper we do not boil the pulp we use; so the boiling cost must go up when we use more pulp and less grass.

*Mr. Ginwala.*—Yesterday I think you told us that when you worked your forests there would be reduction. You have not made any allowance for that here.

*Mr. Carr.*—We shall be using more grass. All these figures are per ton of output. When we are using grass instead of pulp we shall be using more caustic soda. When we use it we shall only have to add Rs. 50 instead of Rs. 100 for imported pulp.

*Mr. Ginwala.*—What I am not quite clear about is this: Do you expect any economy in the average cost of your raw materials, excluding of course the imported pulp, when you work your own forests and when you are nearer your forests and freights are reduced?

*Mr. Carr.*—I gave a figure yesterday about reduction in Ramnagar field, and we expect to reduce it still further.

*Mr. Ginwala.*—That factor is not taken into account here.

*Mr. Carr.*—But we shall be using more grass per ton of outturn.

*Mr. Ginwala.*—But grass is not more expensive than the other materials that you are using.

*Mr. Carr.*—No. It varies from Rs. 2-8-0 to Rs. 1-4-6 and we have got to try and bring Ramnagar down considerably. Our chief reduction in cost will come from improved outturn.

*Mr. Ginwala.*—Not by cheapening of any raw materials? It will be Rs. 138 for primary raw materials and that is an increase of cost from Rs. 102.

*President.*—The point is that your primary raw materials are going to cost more because you have to use more per ton of paper, but I gather you have taken the rate at a lower figure.

*Mr. Carr.*—Yes.

*Mr. Ginwala.*—What it comes to is this that in the primary raw materials, your purchased pulp and the auxiliary raw materials, there will be a saving of Rs. 14 a ton?

*Mr. Carr.*—Yes.

*President.*—Suppose you take your grass at the same rate as it was in 1923 would there be any saving then in substituting grass for pulp?

*Mr. Carr.*—Practically none. £17 c.i.f. per ton of pulp compares with Rs. 2-8-0 a maund of grass.

*Mr. Ginwala.*—In this estimate at what price have you taken the purchased pulp? Have you taken it at present prices?

*Mr. Carr.*—Yes.

*Mr. Ginwala.*—What is this year's price?

*Mr. Carr.*—£14.

*Mr. Ginwala.*—Under "power and fuel" you have taken Rs. 45 as the total cost per ton. How much coal does it represent?



*Mr. Carr.*—6 to 8½ tons.

*Mr. Ginwala.*—You expect a reduction in the price of coal, not in the consumption?

*President.*—In 1923 they were using 6½ tons of coal and they expect to get a reduction to 6.

*Mr. Carr.*—We use about 7½ tons for a ton of paper.

*Mr. Ginwala.*—What is that due to?

*Mr. Carr.*—That is due to inefficiency.

*Mr. Ginwala.*—It is for 1923, but what about previous years?

*Mr. Carr.*—About 6½ tons. The Home mills say they use only 2½ tons and we work at 6½.

*Mr. Ginwala.*—We have got a mill here which consumes only 4½ and some other mills use 5 tons per ton of paper.

*Mr. Carr.*—There again we shall be using more when we use more grass which we do not use when we use pulp. That is where the economy of pulp comes in.

*Mr. Ginwala.*—The mill which is using 4½ tons coal does not use much imported pulp.

*Mr. Carr.*—It is a matter of boiling jute with lime: they only want about 25 to 35 lbs. pressure.

*Mr. Ginwala.*—I am rather inclined to think that 6½ tons is a good deal more than you ought to use. That is the highest figure we have got yet. If you save even one ton it means a lot.

*Mr. Carr.*—We are working as hard as we can to do that.

*Mr. Ginwala.*—As you will find from the papers, when they are published, that is even a good deal more than the Indian consumption. It should not be so. Do you put it down all to inefficiency?

*Mr. Carr.*—To what else? We do not get the full heat out of it. That is the only way we can explain it.

*Mr. Ginwala.*—You get your coal direct from the collieries. Is there no leakage between the works and your collieries?

*Mr. Carr.*—There are two or three miles.

*Mr. Ginwala.*—I came across a case in which there was a leakage of about 15 to 20 per cent. before it ever reached the factory.

*Mr. Carr.*—I know of a bad case in Calcutta.

*Mr. Ginwala.*—The point certainly requires examination.

*Mr. Carr.*—Yes.

*Mr. Ginwala.*—Supposing we were to work out a reasonable cost of production in the country, not with reference to any particular factory at present, but a representative factory, should we be justified in taking 5,000 tons of finished paper as the unit?

*Mr. Carr.*—I should think it is quite a fair economic unit.

*Mr. Ginwala.*—Now supposing bamboo figures turn out to be more favourable for the production of paper in this country than grass or any other material, would the Board be justified in taking the bamboo pulp as the representative article for the purpose of judging what the cost ought to be of producing paper in this country.

*Mr. Carr.*—It is difficult to say because bamboo would not make the same class of paper at present. I won't say whether it would be better or worse.

*Mr. Ginwala.*—Supposing that bamboo paper is capable of supplying all the reasonable requirements of the country, would not the Board be justified in taking the bamboo pulp as the basis of manufacture for judging the cost of production in this country?

*Mr. Carr.*—I imagine that, if its effects are better than grass, we shall all be using it in a greater degree.

*Mr. Ginwala.*—The question is this from the country's point of view. Supposing grass pulp paper cannot be produced at anything below Rs. 500 a ton in the country whereas all the paper made of bamboo pulp costs Rs. 450, why should the country pay Rs. 50 more? What is your opinion in that case?

*Mr. Carr.*—I am not justified on this consideration to ask for protection on grass paper.

*President.*—If the Board is satisfied that the bamboo proposition is really good and the most satisfactory, efficient and economical way of making paper in India, in that case you think we are justified in making our recommendations on the basis of bamboo?

*Mr. Carr.*—I think so.

*Mr. Ginwala.*—I notice one thing. These figures are not in detail, but from what one can see, if bamboo and grass pulps both produce similar classes of paper, there would not be room enough for the two. There are several kinds of paper which are not manufactured in this country.

*Mr. Carr.*—The Sulphide pulp people at Home make good papers to try and substitute for grass but still the grass mills are drawing their supply from Africa. Grass is required for certain demands. As I said yesterday I do not presume that 90 per cent. of the industry will be built on grass.

*Mr. Ginwala.*—What sort of market is there now that the Indian manufacturer can capture—e.g., packing paper 8,000 tons roughly in 1922-23? Can the whole of that market be captured by the bamboo or the grass people?

*Mr. Carr.*—Grass would not do, but bamboo might. Grass is too expensive; we can make them from jute.

*Mr. Ginwala.*—Then there is printing paper about 10,000 tons. Of that I take it a good deal must be newsprint.

*Mr. Carr.*—I think newsprint comes under that.

*Mr. Ginwala.*—How much of that would you estimate for newspaper?

*Mr. Carr.* My own estimate is about 4,000 tons of news come in, but that is very much lower than what Mr. Muir told me yesterday. They think that about 9,000 to 10,000 tons come in.

*Mr. Ginwala.*—Writing paper and envelopes—of these not much is manufactured?

*Mr. Carr.*—We have a stationery plant.

*Mr. Ginwala.*—Would the Indian manufacturer capture the whole of this market of 8,000 tons?

*Mr. Carr.*—There will always be people who would want higher classes of paper for writing.

*Mr. Ginwala.*—Whether we take grass or bamboo, we must take the cheaper material to start with as being good for the country. Having taken that the question arises, when there is already a market for the local product of 33,000 tons, how much additional market this industry can capture. In calculating the cost of production we must take the bigger output.

*Mr. Carr.*—I made a calculation of 90 per cent. and I did answer the question.

*President.*—You gave that figure undoubtedly, but it does not seem to be justified unless you make some packing papers.

*Mr. Carr.*—We do make them, but Mr. Ginwala asks whether we can do it from grass. Packing papers cannot be made from grass. It might be made from jute and other things and possibly from bamboo.

*Mr. Ginwala.*—Are these costs of production kept separately for different kinds of materials—Jute, hemp, rags and so on?

*Mr. Carr.*—We shall give you the cost of each class of paper.\*

*Mr. Kale.*—You say in answer to question 110 that the works cost of 1923 was increased considerably by the low output arising generally from labour

\* See Statement II (rii).

working slow. I cannot understand what you mean. Why did labour work slow in that particular year? Was there any special reason?

*Mr. Carr.*—They were better in 1924 than they were in 1923 and 1923 was as bad as 1922. My opinion is what they are earning is in excess of their standard of living, and the result is that they do not attend regularly, and unless they do attend regularly we cannot have our machines running. Things are improving a bit: possibly it is due to crops having not been too good just in the immediate locality which makes people keener about money.

*Mr. Kale.*—It is a temporary cause?

*Mr. Carr.*—I do expect an improvement, given an improvement in the standard of life.

*Mr. Kale.*—Will that lead to improvement in efficiency?

*Mr. Carr.*—Yes.

*Mr. Kale.*—In the figures that you have given in answer to question 111, the last item is "All other items—Rs. 21"; what is the corresponding item in table IV? You have not given anything there.

*Mr. Carr.*—It does not come in there.

*Mr. Kale.*—Here you have got all other items—head office, interest, packing "Rs. 21."

*Mr. Carr.*—Packing comes under 7 there.

*Mr. Kale.*—And the other expenses are covered by Rs. 21?

*Mr. Carr.*—Supervision, etc., is there.

*Mr. Kale.*—You mean that Rs. 21 is distributed over the other heads there in that table?

*Mr. Carr.*—I believe that is right.

*Mr. Kale.*—With regard to your ordinary current repairs you hope that there will be a reduction. There has been an increase of 138 per cent. between 1917 and 1923. How do you expect that there will be a reduction? On what account will it be?

*Mr. Carr.*—Prices are dropping a little and the incidence will fall with the improvement in outturn.

*President.*—What I endeavoured to do was to obtain, on the basis of the figures you have given for the various items of overhead charges, a figure for a typical all-in cost. We have taken Rs. 480 a ton as what the works cost is likely to be. Working on an outturn of 8,000 tons and taking the working capital at Rs. 15 lakhs as you have given, if you divide that all by 8,000 tons I arrived at the figure of Rs. 15 a ton as interest on working capital in the all-in cost. Have you got any figure?

*Mr. Carr.*—That is about double of what was paid as interest last year.

*President.*—What must be happening at present is part of your working capital is provided from your own resources. What you actually pay as interest has no particular relation. In one way or another you are incurring this cost of Rs. 15 lakhs?

*Mr. Carr.*—Yes.

*President.*—Depreciation I calculated roughly at 6½ per cent. on the figures you have given as the present-day cost of a mill having the same outturn, between buildings and machinery at an all round rate and I arrived at a figure of Rs. 40 a ton as depreciation. I have left out the agency commission but head office expenses I take at Rs. 10 a ton, that is reducing the head office expenses a little you make Rs. 9,000, I take it, on Rs. 80,000. Manufacturer's profit I take at Rs. 75 a ton. That brings the all-in cost to something like Rs. 620. Is that anywhere near what you at present calculate your all-in cost? Is it in the right neighbourhood?

*Mr. Carr.*—Our present all-in cost is not as high as that.

*President.*—The amount is a little higher because I have taken it on a higher output than you are getting.

*Mr. Carr.*—It would be somewhere near Rs. 544.

*President.*—The point is this that on the figure I took I arrived at a final total of Rs. 620 a ton which is equivalent to Re. 0.45 per pound. Is what you are aiming at in making the proposal of 25 per cent. the average price or something like that?

*Mr. Carr.*—Very much less than that.

*President.*—Well, it does not seem to me that 25 per cent. on the figure you yourself have given is adequate. Let me put it this way. What is the average price you are making? What would you expect to get if the 25 per cent. duty is put on?

*Mr. Carr.*—I could not answer that straight off. It is a matter of calculation.

*President.*—It is rather important. Before you put forward a particular request for protection, you must be able to show what you expect to get.

*Mr. Carr.*—It is very difficult to say. We may be taking a certain percentage on printing paper, we may be taking a bigger percentage on *badami*. I am afraid I cannot give you the average price.

*President.*—Can you tell us what is the average price which you would get for each of the different kinds of paper?

*Mr. Carr.*—I have not considered that.

*Mr. Ginwala.*—On a factory with an output of 5,000 tons what would you consider to be a reasonable amount of working capital?

*Mr. Carr.*—I am afraid I cannot say that off-hand.

*Mr. Ginwala.*—Do you think 6 months turnover will be a reasonable amount?

*Mr. Carr.*—I should think so.

*Mr. Ginwala.*—Agents' commission you have taken as 15 per cent.; of course there are unusual circumstances, but what would you consider as the normal amount?

*Mr. Carr.*—10 per cent.

*Mr. Ginwala.*—How is it calculated? We find in some cases it is calculated without making allowance for depreciation.

*Mr. Carr.*—That is given in answer to question 126.

*Mr. Ginwala.*—If that is a fair way of calculating agents' commission, depreciation and interest on debentures has to be paid in any case, has it not?

*Mr. Carr.*—Yes.

*Mr. Ginwala.*—I would like to know what is the percentage of net profits.

*Mr. Carr.*—In paper mills?

*Mr. Ginwala.*—Take business generally.

*Mr. Carr.*—A good many of the concerns get commission on revenue, 10 per cent. on profit for coal companies is general.

*Mr. Kale.*—Will you please tell us something more about this 5 per cent. more "being paid owing to the managing agents having saved the Company from liquidation" and so on? Is it remuneration for the actual capital that was provided by the managing agents?

*Mr. Carr.*—Two mills had just been liquidated and our mill was going in exactly the same direction. We put up the scheme to the shareholders and their attitude was such that there was no other way of saving it unless we provided the money ourselves, and we did so on certain terms and one of the terms was 5 per cent. extra on profits.

*Mr. Kale.*—So that is for saving the Company from ruin? Is it saving or is it interest on capital?

*Mr. Carr.*—We get no interest on capital.

*Mr. Kale.*—The interest you had to pay in getting the capital? What was the service that you rendered to the Company?

*Mr. Carr.*—We supplied the capital, took up the debentures and supplied working capital.

*President.*—I think it is rather important that we should know what is the total amount the managing agents have drawn in commission.

*Mr. Carr.*—In how many years?

*President.*—It is most convenient to have it since the time of reorganization, that is 1904, because 15 per cent. is an unusually high rate.

*Mr. Carr.*—I will send you the information.

#### XI.—CLAIM FOR PROTECTION.

*President.*—I am not quite sure that I understand what you say in answer to questions 133(a) and (b). After all 133(a) is merely this that the paper industry is not one of the industries where large scale production means economy. I gather that you do not think it is.

*Mr. Carr.*—No.

*President.*—That is to say, assuming that 5,000 tons is an economic unit of production, you would not gain very much in economy if you had a larger factory with an output of 10, 15 or 20,000 tons.

*Mr. Carr.*—I should think that ours is an economic unit.

*President.*—In (b) you say "We do not think the supply of all India's requirements from Indian manufacturers is a practical proposition." Is that, general statement applicable to all industries or is it applicable only to the paper industry?

*Mr. Carr.*—To the paper industry.

*President.*—On the other hand you say "There is no reason why we should not produce 90 per cent. of our requirements."

*Mr. Carr.*—That is right. I think it can be worked up to that. Probably in course of time the whole need of the country can be supplied.

*President.*—Why is it not a practical proposition?

*Mr. Carr.*—It is not so for the immediate future.

*President.*—Do you think 90 per cent. is a practical proposition?

*Mr. Carr.*—I think that can be arranged for.

*President.*—You say "The paper industry seems to be peculiarly suitable for Indian economic conditions, in so far that the large proportion of labour used in its production, from the collection of raw materials to the handling of the finished produce, requires no skill, while the skilled labourers require no exceptional qualifications in the way of physique." On the other hand you tell us that you have been unable to make any progress in 20 years in reducing your European labour. In so far as that is due to insuperable difficulties, it is evidence that the paper industry is not well-suited to Indian economic conditions.

*Mr. Carr.*—I mean there is not the supply of people who could do the supervision in this industry as in the case of a great many other industries at present.

*President.*—Any industry in which no progress was made in 20 years in that direction must for the same reason be unsuitable to India.

*Mr. Carr.*—Does this conclusion apply to Jute?

*President.*—It may be that there are disadvantages in these industries which are counterbalanced by very large advantages on the other side, but these are not before me as they have not appealed for assistance. All I am pointing out to you is that if you have not been able to make any progress in 20 years, the inference that can be drawn is that there is something in the industry which is not quite suited to Indian conditions.

*Mr. Carr.*—It is only with regard to the 14 hands out of 1,200 we employ. The others have proved themselves eminently suited. All our machinemen are Indians. It is only the supervision that is European.

*President.*—But look how expensive the supervision is.

*Mr. Carr.*—It is Rs. 24 a ton.

*President.*—The fact is susceptible of other explanation but still it is a point to be borne in mind. Then you say in answer to question 136 that "We consider protective duty should be imposed on all classes of paper" and the reason you assign is that if that is not done certain kinds of paper, newsprint for instance, would be used, if they were left out, for purposes for which Indian manufactured paper is at present used. Well, I think what you are chiefly concerned about is that protective duty should be imposed on all the low valued papers, but you would not be so much concerned if it were merely proposed to exempt bank papers and high class papers of that kind.

*Mr. Carr.*—We are making medium bank paper and they would certainly do for the highest class of bank papers and they are improving.

*President.*—I am going on the answer given yesterday that high class papers, for which linen rags would be required, could not be made in India.

*Mr. Carr.*—That is so.

*President.*—Let us assume an enquiry was made and it was ascertained quite clearly what was made or was likely to be made in India and that certain kinds of paper—the highest class of paper—were found not likely to be made in India, would it really affect you if these were left out?

*Mr. Carr.*—I don't think so.

*President.*—Therefore what you are mainly concerned with is that none of the cheaper papers should be left out?

*Mr. Carr.*—Yes, the papers that we can make.

*President.*—Now here you particularly ask that papers that you cannot make should be included.

*Mr. Carr.*—Newsprint, yes.

*President.*—The general principle that we have followed so far in the Tariff Board is that we did not consider it advisable to put protective duties on articles which are not produced, or are not likely to be produced, in this country. On the other hand, we have admitted the principle in the case of our steel enquiry that protective duties should be placed on articles which compete with articles made in India, even though they themselves are not made. For instance wrought iron bars are not made in this country, nevertheless we proposed a duty on them, because at a certain price they would be able to compete with steel bars. What we say about newsprint is analogous to that. But if the difference in price to the newspapers became something very serious, and if they were able to show that the result might necessitate very serious change in the conditions under which they were published, how is the Tariff Board to meet a question of that kind? After all it is a difficulty, because it is possible that a higher duty on newsprint might very seriously affect the conditions of publication.

*Mr. Carr.*—Not of newspapers.

*President.*—It might.

*Mr. Carr.*—Not by 10 per cent.

*President.*—It is surely for them to answer that. I must ask you to proceed on the assumption that it might affect them. After all it is for them to tell us what the effect would be. I do not know what the effect is going to be, but would it not be necessary to weigh one interest against the other?

*Mr. Carr.*—Yes.

*President.*—Supposing we raised the duty on every class of paper to 25 per cent. leaving newsprint at 15 per cent., for what purposes do you think it would be used for which it is not used at present?

*Mr. Carr.*—As scrap paper, the cheapest paper in the bazar, cheapest printing and things of that sort.

*President.*—Do you happen to know what the present price of newsprint is?

*Mr. Carr.*—I do not know the bazar price.

*President.*—What we are getting at is this. Let us take it this way. Is newsprint in the bazar to-day actually cheaper than the kinds of paper that you think might be used?

*Mr. Carr.*—I don't think newsprint can be had in the bazar to-day. I think it comes in reels.

*Mr. Ginwala.*—Not necessarily. Of course big people who have got rotary presses must have it in reels, but the ordinary printing press get it from the bazar.

*Mr. Carr.*—I am afraid I do not know.

*President.*—I think it is up to the manufacturers of paper, if they apprehend this consequence to follow, to compare prices and show what the effect would be. It is not enough for you to say in a general way that you think it will happen.

*Mr. Carr.*—I can give you the c.i.f. price.

*President.*—What I want to know is, the present price of certain papers made in India is so much, the present price of newsprint is so much. If the duty on certain kinds of paper is raised we shall be able to get a slightly higher price for our paper so that difference between our price and newsprint will be so much. I want this sort of information. I want to know exactly what the duty is going to mean to you.

*Mr. Carr.*—Newsprint is 2½d. as against 3½d.

*Mr. Ginwala.*—There is a difference of about a penny?

*Mr. Carr.*—Yes.

*President.*—I think it is desirable that you should develop that a bit more. Your view may be correct, but you have got to give us more evidence.

Then, in answer to question 140 you say: "We trust our various replies have made it clear that the paper industry's petition for protection is based on the question of dumping and consequently has nothing to do with the years it has been established." From what you said yesterday I gathered that was your case, but I must add that apart from this one answer and apart from your oral examination yesterday, I should not have gathered from your representation that that was your position because it amounts to almost an abandonment of the attempt to justify your case for protection. The principle laid down by the Fiscal Commission definitely did contemplate the development of an industry to a larger and larger extent as time went on to supply the needs of the country. That is the kind of industry they were thinking of. I admit that you have in some of your answers tried to prove that your industry satisfies these conditions, but here you are almost going back upon it. After all, if your case is that it is only dumping that you have to fear, you must produce a great deal of evidence about dumping.

*Mr. Carr.*—That has not been raised at all in the questionnaire.

*President.*—Even in your original representation there is not much evidence.

*Mr. Carr.*—We have got invoices to show what might be called an unfair competition.

*President.*—I might put it this way not because I want you to develop this side. You are at perfect liberty to give us any more information on this side which you can, but I rather want to explain the way I look at it. First of all it has got to be established that the protection of an industry is in the national interests. Once that is established, it does not seem to me to matter what is the precise reason of the necessity or how the need for protection has arisen. That seems quite a subsidiary point. But the main point is whether protection is justified. If it is, it has got to be given, whatever the cause of the low prices. That is the sort of general way in which we have been tackling the problem. However, if you think that you can give us any more information about dumping, we shall be glad to have it. Personally I don't regard it as a very important side of the case.

*Mr. Carr.*—No.

*President.*—In your last answer you say "We see no conflict between the claims for protection of paper and of pulp, although the latter is raw material to the former; we feel that our arguments in favour of protecting the paper

industry would be considerably weakened were we to object to the increase of duty on pulp." It will raise your cost if a duty is imposed on pulp.

*Mr. Carr.*—It will make us change from imported pulp to indigenous pulp.

*President.*—Supposing this duty were put on—and it could only be imposed on the basis that the Board, the Government of India and the Legislature were satisfied that the bamboo proposition was a sound proposition—it would make you change to bamboo pulp. Would you make your own pulp from bamboo, or would you purchase it from somebody else?

*Mr. Carr.*—We should probably make our own.

*President.*—Well, the difficulty to me is that you get to the paradoxical state of affairs. Directly the duty is put on, there will be nobody to purchase pulp in India. You will all be making your own. What is the good of the duty?

*Mr. Carr.*—I have tried to explain that it seems to me to be unreasonable to ask for a 25 per cent. duty on paper and allow the Swedish pulp to enter the country freely.

*President.*—This is what you say "Protected paper and free pulp would likely lead to the establishment of a paper industry based on foreign materials, and this is not in the interests of the country." Does not this rather give away the whole case for grass? It is actually cheaper to manufacture paper out of imported pulp and compute successfully.

*Mr. Ginwala.*—If a protective duty is put on paper and if pulp is allowed to enter the country free of duty, it may be more remunerative for the foreign manufacturer to manufacture his paper out of the imported material in this country.

*President.*—If he could do that successfully, that must mean that grass is a very expensive material.

*Mr. Ginwala.*—If paper is protected?

*Mr. Carr.*—I have said what it seems to me must follow from any protection. You are transferring your competition from the imported finished product to the raw material in the country. If you protect paper, there will be an expansion of the industry and there will be competition for the raw material in the country.

*President.*—I am afraid I don't quite follow.

*Mr. Carr.*—If you protect the industry here, there will be more concerns started up and that will lead to competition for the raw material. So, we escape competition in finished products to some extent at the price of increased competition for raw materials. I don't see how we can get away from that.

*President.*—On that basis grass is, or will become, much more expensive.

*Mr. Carr.*—It does not mean that we will always be using grass.

*President.*—Mr. Ginwala told you that we would be justified subject to certain conditions in treating the case for protection as dependent mainly on the utilisation of bamboos in India, and I am really getting at the same point from another angle.

*Mr. Carr.*—I agreed to it yesterday. When Mr. Ginwala mentioned that point yesterday I remember saying that we never thought that we would be able to build up a huge industry on grass.

*President.*—You ask at the end of your answer that, if it is decided to levy a duty on pulp such duty may not come into effect for a period of two years. At the outset there would be nobody to sell pulp and it would take some time to put up the necessary works for increasing the supply of bamboo pulp. The result of putting a duty on imported pulp would be to expedite the development of the bamboo pulp industry, but not on the basis of establishing an industry which did nothing but make pulp. That would be the ultimate effect. The immediate effect would be to increase the costs of Indian paper manufacturers.

*Mr. Carr.*—If you gave us a protection of 25 per cent. we should probably be returning 4 per cent. It would not give us a protection of more than 21 per



cent. If you put 20 per cent. duty on pulp which is one-fifth of our raw material, that would practically increase our cost by 4 per cent.

*President.*—The point that requires very careful examination is this. After all, to put an import duty on a commodity which is not produced and sold in India is unusual. As far as I know no economic books deal with facts of that kind. It is rather a paradoxical case. It might operate in quaint and unexpected ways.

*Mr. Carr.*—Does it not stand the steel analogy?

*President.*—I have brought in my steel analogy in the case where you propose to put a duty on newsprint paper, because it might compete with the kind of paper which you manufacture. Both newsprint and your paper are at present and will be in the future bought and sold in India. But the point I am making is that nobody will sell and nobody will purchase pulp. Each manufacturer will make it for his own use.

*Mr. Carr.*—There is a possibility of export trade from India in bamboo pulp.

*President.*—If export is possible, it is wholly needless to put an import duty on pulp.

*Mr. Carr.*—Even after the first two years?

*Mr. Ginnwala.*—With regard to the question of raw materials: I want to be perfectly clear. You don't lay emphasis on the protection of paper manufacture out of a particular raw material.

*Mr. Carr.*—No.

*Mr. Ginnwala.*—If the Board find that the only raw material which satisfies all the conditions is bamboo, will you agree to the Board recommending the protection of paper on the basis of the cost of production of paper from bamboo.

*Mr. Carr.*—No. I thought you said on no particular material.

*Mr. Ginnwala.*—Supposing we found that bamboo was the only practical proposition, and that no other material which the paper manufacturers use can produce paper as cheaply as bamboo, what is your position?

*Mr. Carr.*—You are simply saying that there is nothing better in India than bamboo. That would stop all progress.

*Mr. Ginnwala.*—Why?

*Mr. Carr.*—If you only protect paper made from bamboo it would stop all progress.

*President.*—Mr. Ginnwala is not suggesting that only paper made from bamboo should be subject to protective duty.

*Mr. Carr.*—That was what I understood.

*President.*—What he means is that the measure of protection should be ascertained on the basis of the use of paper made from bamboo.

*Mr. Carr.* I do admit that.

*Mr. Ginnwala.*—With regard to Question 133: what we mean is that in industries production on a large scale leads to a reduction in the cost of production.

*Mr. Carr.*—Yes.

*Mr. Ginnwala.*—If you combine the two processes in one place, that is to say, if you manufacture pulp and paper at the same place, I can quite conceive that economy may not be possible by merely increasing the output, but supposing pulp is produced in the vicinity of the raw materials, as it is done in some other countries—supposing you yourself went to Burma and established a pulp factory and made pulp only and brought it down to another place where you could convert it into paper—would not that lead to economy?

*Mr. Carr.*—There is the question of freight and capital charges, also supervision and various other things.

*Mr. Ginwala.*—Supposing you manufacture yourself pulp at Cuttack on a very large scale and bring it up to Calcutta where you have a factory to convert it into paper, would it not be more economical?

*Mr. Carr.*—It would depend on capital charges and various other things. If you are going simply to make pulp in Cuttack and make it into paper at Calcutta, it is a question whether you will take it to Calcutta as dry or wet pulp.

*Mr. Ginwala.*—I could not tell you that.

*Mr. Carr.*—That is a matter for consideration.

*Mr. Ginwala.*—That is the way in which the industry has expanded in many countries.

*Mr. Carr.*—Generally the pulp and paper industries are separate.

*Mr. Ginwala.*—Take the case of England. In the case of Esparto paper she imports grass. In the case of wood pulp she finds it cheaper to import pulp. Why should not India do the same?

*Mr. Carr.*—I have not considered that point.

*Mr. Ginwala.*—I wanted to know whether that would not be cheaper.

*President.*—In the same connection: in the case of Scandinavian mills I take it that they are run by electricity. In India it may not be possible always to use electric power, except in localities like the Western Ghâts. If the question of coal comes in, then the proposition which Mr. Ginwala is putting to you becomes much more difficult and that is the aspect of the case which you might, while thinking it over, keep in view, how far Indian conditions admit of the separation of pulp manufacture from paper manufacture. You may have considered it in connection with the Cuttack plan which has not materialised, but that aspect of the case must almost certainly have been considered by your people when they considered whether they would make pulp at Cuttack or at Ranigunge.

*Mr. Ginwala.*—Is it not the opinion of experts that the manufacture of pulp is a better commercial proposition on the whole than paper, only because the chances of exporting paper are smaller than exporting pulp?

*Mr. Carr.*—I think that the majority of Government experts generally take paper prices as a level for showing the return.

*Mr. Ginwala.*—What I meant was that the export of pulp was a more commercial proposition for India in the future than the export of paper.

*President.*—That is looking a long way ahead.

*Mr. Carr.*—Quite.

*Mr. Ginwala.*—There has always been at least a penny difference between the newsprint price and the lower grades of printing paper.

*Mr. Carr.*—At least I should say: before the war they used to get it at about 1/10 in their godowns.

*Mr. Ginwala.*—It did not very much lead to the substitution of newsprint for ordinary printing paper?

*Mr. Carr.*—No.

*Mr. Ginwala.*—Why do you anticipate that a difference of 10 per cent, which would be about three pices, would lead to more substitution?

*Mr. Carr.*—If you put a protective duty on paper, it would put the prices up. Directly the prices go up, the first thing that the consumer does is to see whether he can save on paper and he goes for a worse quality.

*Mr. Ginwala.*—So far it has not had that effect. There has been a big margin.

*Mr. Carr.*—That is shewn in our sales. Firms and companies go for a lower quality of paper. Take even Government. They cut down the quality of the paper trying to economise.

*Mr. Ginwala.*—As regards bigger newspapers they do their own importing?

*Mr. Carr.*—Yes. They get favourable rates.

*Mr. Ginwala.*—The vernacular Press, I think, use very often either locally made paper, so that there is a very small percentage left, or they use the newspaper print which is got in the bazar.

*Mr. Carr.*—I think so. As far as bazar conditions are concerned, I am not a closely informed witness.

*Mr. Ginwala.*—I have heard it stated that you cannot substitute newsprint very largely for printing paper.

*Mr. Carr.* It won't last long.

*Mr. Ginwala.*—Most of the printed matter is expected to be preserved. It is not likely that a man would use newsprint.

*Mr. Carr.*—No.

*Mr. Ginwala.*—It may be used for hand bills and things of that kind.

*Mr. Carr.*—Yes.

*Mr. Ginwala.*—With regard to your answer to Question 137 : you have not made any proposal as to what the Tariff Board would do if it was in existence. You simply say that the Tariff Board will be in existence to receive representations.

*Mr. Carr.*—We do not know the conditions that may arise.

*Mr. Ginwala.*—Have you followed what they have done in the case of steel? They have given power to the Governor General to vary the amount if the industry does not get protection which it is intended that it should get.

*Mr. Carr.*—When we wrote this, we simply had in our mind the big débâcles in exchange which might make it necessary for us to go to you.

*President.*—There is this difficulty. It is quite definitely assumed in the scheme of offsetting duties that was adopted in the last Bill that it should be possible to ascertain the price of the imported article. It is an extremely difficult thing to ascertain in the case of paper.

*Mr. Carr.*—Take our own mills. We have six or seven kinds of paper varying from Rs. 400 to 800 a ton. An average would not apply efficiently for the difference is so big.

*Mr. Ginwala.*—With regard to Question 141, is it not inevitable that, if paper is protected in this country, pulp also must be protected? The idea of protection is that you should use indigenous materials.

*Mr. Carr.*—In order to conform to the Tariff Board's requirements the duty on pulp seems to me to be a corollary.

*Mr. Ginwala.*—Otherwise, as you pointed out, foreign firms may establish factories and use foreign pulp and convert it into paper, so that, when the price of paper goes up in consequence of protection, they will reap the full advantage. They are doing it in the case of matches. It remains to be seen how far they are going to succeed.

Then you say that the duty on pulp should not be imposed for two years.

*Mr. Carr.*—Give us time to get the mills in order to use indigenous materials, and it will save any increased struggle.

*Mr. Ginwala.*—Supposing paper gets protection and no step is taken to protect pulp, the question of vested interests and things of that kind may arise.

*President.*—I think what Mr. Ginwala contemplates is that legislation will be passed giving power to the Governor General in Council to give effect to the increased duty on pulp by notification after time has been given to the manufacturers to prepare.

*Mr. Carr.*—That is right.

*Mr. Ginwala.*—That of course is the same thing.

*President.*—It would warn the industries.

*Mr. Carr.*—It would enable the pulp manufacturers to go ahead.

*Mr. Kale.*—From the answers that you have given to questions it appears as if you wanted protection only against what you call dumping. For instance, if it were proved to our satisfaction that foreign manufacturers of paper are selling paper in this country not below but at a decent profit, you won't claim protection?

*Mr. Carr.*—That is so. This questionnaire, as you say, has been answered with that in mind. We believe that we are capable under present day conditions of meeting competition from other countries at their average cost of production, but when they give us their surplus production and when they have rebates on freight as they had in 1914 in Germany, and when they have depreciated exchanges as in the case of Austria and Germany, then we cannot meet that competition.

*Mr. Kale.*—I am afraid that you are taking a serious risk when you say that if the Tariff Board is satisfied that the foreign manufacturers are not selling their goods in this country at cost price *plus* a decent profit, then the industry would not require any protection.

*Mr. Carr.*—That is the attitude I took before the Industrial Commission and the Fiscal Commission, and I hold it to-day.

*Mr. Kale.*—In the case of other industries what they are likely to say is this, that for some years to come they will not be able to compete with foreign manufacturers even when there is not the so-called dumping, and that they want protection for a temporary period because there are certain difficulties which they want to overcome during that period.

*Mr. Carr.*—That is not my claim.

*Mr. Kale.*—In answer to Question 139 you say that the effect of an additional duty of 10 per cent. will not be to raise the price of paper.

*Mr. Carr.*—It won't allow us to raise our prices, but it will of course give us a better return in so far as we shall be selling more of our output near our mill instead of having to send it to upcountry markets as I explained yesterday.

*Mr. Kale.*—Are not your prices governed by the prices of foreign paper that comes into the country?

*Mr. Carr.*—Yes.

*Mr. Kale.*—If that is so, and if prices go up as a result of an addition of 10 per cent. duty, will you not have margin and you may perhaps increase your prices and bring them up to the level of prices of foreign paper?

*Mr. Carr.*—Our prices are already higher as I pointed out.

*Mr. Kale.*—Only slightly?

*Mr. Carr.*—We can maintain that.

*Mr. Kale.*—What is there to prevent you from raising your prices?

*Mr. Carr.*—I don't think that we can get them. I don't see any chance of getting higher prices.

*President.*—What was the duty before the war?

*Mr. Carr.*—5 per cent.

*President.*—At that time you got three pies more than the importer?

*Mr. Carr.*—Yes.

*President.*—When the duty has been raised to 15 per cent. you are still getting the same three pies. If the duty is raised to 25 per cent., you will probably still get the same. One increase in duty has left that unchanged, and the natural inference is— and indeed it seems to be from the nature of the case—that you may not get the full amount. It is very difficult to say, but there must be some increase in the price.

*Mr. Ginular.*—You got these same three pies more from Government because of certain facilities.

*Mr. Carr.*—That advantage will always remain with us.

*Mr. Kale.*—As regards your answer to Question 138 about the handicap you are suffering from in the matter of import duty, freight, etc., that is a handicap from which you are suffering. But will it not happen that some mills in Bombay will cater for that market?

*Mr. Carr.*—As I said, if protection came in, we should sell our output much nearer our mill and Bombay would draw their supplies from mills near at hand.

*Mr. Kale.*—That is what I am pointing out.

*Mr. Carr.*—That seems to me to be the natural result of protection.

*President.*—There are various allegations made against you in the representation from John Dickinson & Co. We have no time to ask you questions on that. If you like, you can please send us a note.

*Mr. Carr.*—I shall send it to you from Calcutta.\*

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\* See Statement II (viii).



सत्यमेव जयते

## Witness No. 4.

**The Titaghur Paper Mills Company, Limited, Calcutta.**

## A.—WRITTEN.

*Statement I.—Replies to questionnaire from the Titaghur Paper Mills Company, Limited, dated 25th June 1924.*

With reference to our letter of yesterday's date, we now enclose two fair copies of our questionnaire replies.

With reference to Question 131, we have decided that the part of the reply which was typed on a separate slip "Continuation from 131" should not be published and that we should prefer to give the information orally. Please, therefore, detach the slips from the replies already sent you and return them to us as soon as possible.

If our replies to the questionnaire are to be printed we should prefer to see a proof before the final order to print is given so that we should have the opportunity to make any revisions which are necessary and to decide finally whether it would be advisable to publish all the figures which we have given in our replies.

## REPLIES TO QUESTIONNAIRE.

## I. INTRODUCTORY.

1. The Titaghur Paper Mills were first established as a small mill in the year 1882. It is a public registered Company.

2. It is difficult to ascertain the exact proportion of Capital in the Company held by Indians, owing to the practice of holding scrip on blank transfer, but from registrations which have been made, and from other sources of information we would estimate the proportion to be about 70 per cent. The Company have three Indian Directors on the Board.

The superior management is imported, as it is necessary to have men in touch with the newest methods employed in Europe and America in this industry, but many of the higher subordinate posts in the mill are filled by Indians trained in our Works, and the Chemists are almost entirely Indians. Also, this industry is one which requires a man to be trained from a very early age in a practical manner in mills and there is no class of educated Indian trained in this way available.

3. The Company manufactures pulp for its own requirements only, otherwise it is entirely occupied in the manufacture of paper.

4. The Titaghur Paper Mill commenced to manufacture paper in the year 1884 and has been extended at various periods, the last additions to machines having been made in the year 1905.

The Kankinara Mill commenced to manufacture paper about the year 1891 and was taken over by the Titaghur Paper Mills in the year 1903.

5. The two mills together are at present equipped for the manufacture of—

(a) 17/18,000 tons pulp annually for ourselves.

(b) 20,000 tons paper annually all varieties.

6. (a) From our records the actual outputs were as follows:—

	Tons.
1911 . . . . .	16,415
1912 . . . . .	17,052
1913 . . . . .	17,024
1914 . . . . .	18,451
1915 . . . . .	19,595
1916 . . . . .	20,719
1917 . . . . .	20,078
1918 . . . . .	23,096
1919-20 . . . . .	18,970
1920-21 . . . . .	18,018
1921-22 . . . . .	15,750
1922-23 . . . . .	13,312
1923-24 . . . . .	15,585

(b) No pulp has been manufactured for sale.

7. The mills are situated, one at Titaghur and the other at Kankinara, on the Eastern Bengal Railway.

(a) Reasonably so. The areas have been developed from the centre where the mills are.

(b) Yes, with coal.

(c) The whole of India is the market for all paper mills.

(d) Paper mill skilled labour is sufficient having grown up around the mills where they are, and having been taught and developed with them. For the supply of unskilled labour the two sites are suitable.

In selecting the site of a paper mill in India it is necessary that it should be as far as possible central to its markets and its raw materials, with a plentiful supply of clean fresh water all the year round. Proximity to coal or other fuel is also essential, and the vicinity of a sea port for the import of materials and machinery and the export of finished product by coastal routes.

8. Approximately the percentage is as follows:—

	Per cent.	
White printings . . . . .	50	} This is a general figure and subject to some alteration according to the demands of the markets.
Writings . . . . .	20	
Browns, badamis and news . . . . .	30	

9. (a) Writings, printings and wrappings.

(b) We manufacture some lines which can be classified as good though there is an importation of some small quantities of special papers such as ledger papers and hand-made writings for the manufacture of which special mills cater in Europe, and with which Indian mills do not compete. Our grades would be classified by the trade on the whole as medium, which is what the trade generally demand, and are similar to the productions of the average mill in Europe, and such as are used for general purposes. 10 per cent. may be classed as special qualities. The Titaghur Mills are equipped to make all kinds of paper, both good, medium and even inferior, though the tendency is steadily to improve and make better class papers, with the exception of the very high grade papers mentioned above.

10. Yes. We are compelled to manufacture a large variety in order to meet competition offered by the importers, and owing to there being an insufficient number of mills in the country to admit of specialising in qualities

and interdealing on the British system while as a whole catering for all kinds in demand. Specialisation tends to reduce cost of manufacture, and this will, no doubt, be naturally evolved if the industry is encouraged. The Indian manufacturer is certainly at a disadvantage while conditions compel individual mills to produce so many different kinds and the remedy can only come with the expansion of the industry. Also the Government Departments require a large number of different kinds.

11. The Titaghur Mills manufacture their pulp by the soda process.

## II. RAW MATERIALS.

### (a) *Primary.*

12. The primary raw materials used in Titaghur Mills are Sabai grass, imported woodpulp, rags, and waste paper.

13. Working at the full capacity of the plant, which is the object necessarily in view, the mills could consume about 30,000 tons annually of Sabai grass, 5/8,000 tons of imported woodpulp, and 4,000 tons of rags and waste paper as required, according to the grades of paper made.

Owing to the competition of imported papers we are only now consuming at the rate of 24,000 tons grass, with other raw materials in proportion.

14.

Grass . . . . .	45 cwts—1 ton pulp.
Rags . . . . .	30 cwts.—1 ton pulp.
Woodpulp . . . . .	1½ tons into paper.

15. 26½ cwts. unbleached pulp to give 1 ton paper.

16. As regards Sabai grass, the estimate can only be approximate.

At present the mills have developed the sources of supply as far as economically possible to enable them to manufacture in competition with imported papers. There are, however, some 11/12 lacs maunds in our fields provided it paid to work out the additional quantity, which at present it does not. Undoubtedly further supplies could be found and made available by further investigation and by going further into present fields at a higher cost for collection. The present necessity for the mills, however, owing to the pressure of competition is to reduce costs for raw materials wherever possible. This statement refers to the areas worked by the present mills and as regards other Provinces we have not sufficient definite information to make a statement. Importation of woodpulp is dependent upon the cost of collection and conversion of other raw materials in proportion to the varying prices of the pulp offered from Europe. As regards rags and waste paper, the limit on the Eastern side of India has been reached, both as regards quantities of supply and the cost.

17. The Titaghur Paper Mills draw their supplies of Sabai grass from Sahebgunge, Rewa, Nepal and the United Provinces. The areas from which we obtain our grass supplies are as follows:—

Western Circle in the United Provinces . . . . .	Approx. 4 lacs maunds.
Nepal . . . . .	Approx. 3 lacs maunds.
Sahebgunge (Bihar and Orissa) and Eastern Circle (United Provinces) . . . . .	Approx. 4 lacs maunds.
TOTAL . . . . .	11 lacs maunds.



Average distances from collecting areas to mills are:—

	Miles.
Western Circle . . . . .	920
Nepal . . . . .	580
Sahebgunge and Eastern Circle . . . . .	230

18. Supplies are cut and collected under contract. Means of transport employed between the fields and despatching stations are coolies, carts, camels and bullocks. From despatching stations to mills by rail. Average distances between field areas and despatching stations and on to mills are:—

	Field Areas. Miles.	To Mills. Miles.
Western Circle . . . . .	20	900
Nepal . . . . .	30	550
Sahebgunge . . . . .	18	212

19. Royalty is a fixed amount and is payable yearly irrespective of the quantity of grass extracted from the Western and Eastern Circles and Nepal. The Sahebgunge area royalties are paid by the contractor who supplies to the mills from this area.

	Yearly. Rs.	
Western Circle . . . . .	77,500	Government royalty.
Western Circle . . . . .	1,00,000	Salami.
Nepal . . . . .	80,000	Nepal Durbar.
Eastern Circle . . . . .	10,251	to Government.

20. In 1913-14, we did not work any grass areas, but purchased our total requirements from sundry contractors at Rs. 1-12 per cwt. delivered mills.

Figures available for season 1922-23 on a very curtailed consumption of an abnormally small working owing to renovations at mills are as under:—

(a) *Royalty*—

Western Circle . . . . .	2,463 tons (1 of full working)—Rs. 63-15 per ton.
Nepal . . . . .	4,255 tons (1 of full working)—Rs. 20-7-8 per ton.
Sahebgunge . . . . .	7,637 tons—Rs. 3-6 per ton.

but on a full working capacity of 3 lakhs of maunds each area the figures would be—

Western Circle . . . . .	Rs. 14-3-1 per ton.
Nepal . . . . .	Rs. 8 per ton.

(b) Approximately labour employed by Titaghur Mills in all the areas 16,000 hands.

(c) Freight by road from field to despatching station, Rs. 15-4 per ton.  
By rail from despatching station to mill—average over all areas, Rs. 13-8 per ton.

(d) Miscellaneous (cutting, baling, supervision, buildings, etc.) (the average royalty of Rs. 19 per ton for 1922-23 is included in this figure), Rs. 31-4 per ton.

21. To cut and export as much grass as possible and no other forest produce.

The cessation of cutting and collection in April is a great difficulty and it would assist the mills if the Forest Department could give a longer time. This would relieve the pressure of collection considerably and would consequently reduce costs over all, and avoid what generally happens, viz., the leaving of a certain quantity of cut grass in the forest which cannot be

collected in time. This would also have the effect of increasing the yield from the areas under work in each year.

With regard to royalties as regards the United Provinces in view of the fact that apart from the Paper Trade Sabai is very largely a waste product in the forests, we are of opinion that the royalties might reasonably be reduced to at least half. If the practice of annual burning of grass clumps could be permitted it would undoubtedly help to improve yield and keep down weeds among the grass.

22. Taken as a whole when care and attention is given to the grass fields, there should be no marked deterioration. This entails annual weeding of the grass clumps when growing and to make this worthwhile long term Leases are essential. This has been a difficulty in Sahebgunge but with careful attention, under the conditions outlined and with careful cutting, it is our opinion that there should be no need to anticipate deterioration in the quality or quantity.

23. The mills are now drawing Sabai grass from larger areas than before the war owing to the following reasons—

- (a) The increase which took place during the war, and which has still been maintained to some extent since, in the price of imported woodpulp.
- (b) The consequent competition among the mills for the supply of Sabai, and other materials.
- (c) The necessity for establishing an assured supply of raw materials, at a more or less stable cost, in the hands of the mills, outside of dependence upon contractors, who would naturally raise their price with the rising prices of other raw materials. In this connection it must be remembered that there is no regular market for these materials, such for instance as there is for jute which would give the mills an opportunity of buying from various sources of supply, or from a number of suppliers and they therefore either had to take up and work the fields themselves, or be dependent upon one or two contractors experienced in this work who might or might not take unnecessary advantage of the position. We therefore took up the Western Circle areas in 1919-20. These have proved expensive holding up-to-date but with full working this next year, we hope to get grass at economic rates. These areas will not be worked at their cheapest until a pulp mill is erected near the grass fields and the freight on the raw material saved, which should be a paying proposition if protection is given to pulp.
- (d) Another cause which determined the mills to take this action was the actual establishment of another factory and other projected schemes which might have competed, and which still might compete for the supplies of raw materials.

If bamboo, or other primary raw material, came to be developed, the expansion of the trade would be able to go on, and would only be again limited by markets.

24. Contractors do not keep records to this extent. For our own working we refer to Nos. 20 and 23.

25. This question is answered by the replies as above under Nos. 16, 22 and 23.

26. In our opinion this question as put forward by Mr. R. S. Pearson is regulated by—

- (a) Competition of price of imported papers, wood free, or otherwise, and
- (b) The price for imported easy bleaching pulp.

Apart from the question of other kinds of grass as dealt with later on the mills are not using to-day the total quantities of raw material which are available, but as stated above it is purely a question of cost as it means

going further afield, and to-day the economic limit has been reached for costs, to make paper in competition with imported papers at to-day's prices. If the intention is to foster local manufacture of pulp we reckon that additional considerable quantities of materials are available by going further into present fields and from other fields which the present mills have not prospected as being outside the range of economic working. The economic course would be to make pulp near the grass-fields, but capital is lacking which might come forward with the industry on a more stable basis.

27. This question is answered as above.

28. Undoubtedly paper of very good quality can be made out of certain classes of bamboos, though we hold the opinion that grass paper is in some respects more suited to the present Indian market. Some suitable papers might be made by the combination of the two materials.

29. The main advantage, which the information we have been able to obtain seems to show of the use of bamboo as compared with pulp woods is that by cutting bamboo in rotation over 5 years the growth renews itself during that period whereas pulp wood forests are either destroyed, or take much longer periods of at least 40 years for renewal even where they are treated with all the resources of forestry. One point, however, in the use of bamboo of which as yet there is very little tabulated information in India is that of the flowering period, which is supposed to be once in every 30/40 years, and in which year whole areas of bamboo die out entirely after flowering, and take from 3/5 years again to attain full growth. It is stated that this seldom occurs, however, except in sections of the forests, and not in a complete forest all at once, but on this point information seems very lacking.

30. (a) Sabai and other grasses renew themselves annually. Apart from this fact and bearing in mind reply No. 29 there are undoubtedly further quantities of bamboo available of qualities suitable for making into paper, in Burma and in India.

(b) Continuity of supply would seem assured, apart from the question of flowering.

(c) Accessibility depends almost entirely on the situation of the bamboo forests with reference to transport especially by water. Unless mills can be placed in close proximity to bamboo forests, the bulkiness of the raw material makes transport a very serious consideration. Areas have, however, been prospected, from which it would seem possible to draw supplies in sufficient quantity to justify the erection of plant.

(d) Apart from the cost of extraction to the mill the manufacture of bamboo into paper presents no great difficulty and the yield is good.

(e) Good quality paper can be made from certain classes of bamboo in conjunction with other raw materials.

31. Several other grasses have been tested and examined over the past 20 years in comparison with Sabai. None of them, however, gave a sufficient yield to make them attractive in comparison, or in cost of collection or accessibility.

32. The answer to this is contained under No. 13 and No. 16.

33. Not particularly, but during the war competition forced up figures of royalties.

34. We import no other primary raw materials but wood pulp, and this is chiefly for production of special kinds of paper, or for other technical reasons.

(I) C. and F. price £14-15 (about £12 f.o.b. last quotation).

(II) Calcutta.

(III) Freight 50s. per ton. Insurance 11s. 6d. per cent.

(IV) 7s. 6d. (seven shillings and six pence).

(V) 3s. per ton.

... ..

(VI) Nil

35. We are now on the point of receiving concessions from the railways for rail freights on grass. This was a suggested assistance to the mills mentioned by the Indian Industries Commission and we should naturally hope that we should receive assistance in this respect, which the railways can reasonably give as it is both to their advantage, as well as to that of the industry, that this large carrying trade should be retained in the country. We should wish to have similar concessions on our other country raw materials as, for instance, lime, clay, rosin, as well as on coal, considering the large ton mileage.

(b) *Auxiliary.*

36. The chief auxiliary raw materials used in the Titaghur Mills are as follows for 1922-23:—

(a)

Materials.	Quantity.
	Cwts.
Acid . . . . .	1,032
Alkali . . . . .	65,285
Alum . . . . .	27,425
Rosin . . . . .	8,211
China clay . . . . .	53,994
Lime . . . . .	96,334
Salt . . . . .	37,590
Dyes . . . . .	452

37. (b)

Acid . . . . .	7,415 lbs.
Alkali . . . . .	4,188 cwts.
Alum . . . . .	1,759 cwts.
Rosin . . . . .	58,996 lbs.
China clay . . . . .	3,464 cwts.
Lime . . . . .	6,180 cwts.
Salt . . . . .	2,411 cwts.

The quantity of dyes used per ton of finished paper over a year is negligible.

38. (a) \*Alkali (from Magadi Soda Company), alum and china clay, salt.

(b) Acid, rosin, china clay, lime.

(c) Bleach and caustic.

\* Not importing at present.

Salt (bought from Salt Golahs).	Alum.	China clay.
(a) Britain . . . . .	Britain.	Britain.
(b) . . . . .	£7-15 f. o. b.	£3-3 f. o. b.
(c) . . . . .	Calcutta.	Calcutta.
(d) . . . . .	Freight S. 26-3	£1-12-6 d.
	Inscr. S. 1- p. t.	
(e) . . . . .	Rs. 2 p. t.	Rs. 2 p. t.
(f) . . . . .	Rs. 2-8 p. t.	Rs. 2-8 p. t.
(g) Free . . . . .	15%	15%

Alkali.	S. Acid.	H. Acid.	Rosin.	C. clay.	Lime.	Salt.
(a) Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	100 Mds.
Rs. 0-4 & 5-10-6Rs. 5-9-7.		Rs. 17-8.	Rs. 14-10-8.	Rs. 2-8.	Rs. 1-10-4.	Rs. 95.
(b) N.W.	N.W.	N.W.	N.W.	N.W.	N.W.	N.W.
Magadi Soda Co.	D. Walldie & Co.	D. Walldie & Co.	Crawford & Co.	Nagpur Clay Co.	Malhar & Sylhet Lime Co.	

Bleach and caustic are manufactured from lime, alkali, acid and salt, which are local purchases as particulars above.

Costs as per statements, Form "V."

Our mills are fitted with up-to-date plant for making chemicals and soda recovery.

39. (a) Local products have during the war been fully exploited, *vide* Indian china clay and the manufacture of chlorine and caustic, alumina and rosin, and there is no reason why this should not be continued and expanded in the event of the industry's expansion.

(b) Dyes are never likely to be manufactured in India until local products can compete with German synthetic dyes which are thoroughly suited for paper manufacture.

### III. LABOUR.

#### (a) Field Labour.

40. About 16,000 labourers are employed by ourselves and contractors in extracting and collecting grass for our part of the industry, and this figure is growing. (In addition to this there are a large number of men employed by contractors in collecting, sorting and baling rags and waste paper and a considerable number employed, amounting to about 550 daily, in the mills, for cleaning, picking and preparing these raw materials before conversion.)

(a) The total wages for our own portion of such labour in fields and mills amounted to about Rs. 3,45,000 in 1923. The field labour is irregular and works only for a few months.

(b) The average wages per man is 7 annas to 12 annas per day according to the class of labour employed and according to the work done. The wages in 1922-23 are about 75 per cent. higher than in 1913-14.

41. Each year special arrangements have to be made for obtaining this labour, towards the end of the rains.

42. Of the labour about 40 per cent. is indigenous and 60 per cent. imported very often from long distances. Generally speaking it is available in sufficient quantities.

43. The labour have to be taught how to collect, handle, clean and bale raw materials, and, as a whole, pick the work up fairly easily, but supervision of a capable nature is required always.

#### (b) Mill Labour.

44. Each separate technical process throughout the manufacture requires expert supervision involving the employment of skilled labour from abroad. Some of the Indian labour have become very good in the mill work after the experience gained and are given responsibility accordingly. Paper-making in all processes is a very highly technical industry.

45. With the mill working at full capacity, or working at rather reduced capacity the number of imported labour must be the same, as each process requires expert supervision under all conditions. At present the Titaghar Paper Mills employ twenty\* such experts.

\* Corrected to 20. See oral evidence.

46. Since the factory was established a large number of trained men have been taught, father and son, and have become a recognised paper-making labour force but still requiring expert technical supervision. It is anticipated that this will always be the case because the process of paper-making is always undergoing improvements and alterations and therefore there is need for men with European trained modern technical knowledge. The only way to acquire a knowledge of paper-making is to learn from boyhood and this is how the present skilled labour has learnt. Every encouragement is given them to do so. No apprentices have offered as yet on the technical side of paper-making in this country from among educated Indians to qualify for superior billets: it is doubtful whether they could so qualify without extended training in Europe in mills of different kinds making varying qualities of paper. There is, however, no reason why as the educated men take to industries, and the class grows, that men should not become available. They would have to understand that a long apprenticeship is necessary, and that when taught the mills would expect some return for their work.

47. Our imported men receive £35 a month as compared with about £20 a month in Great Britain.

48 and 49. Total both mills—Approximately 3,000.

		1914.	1923-24.
		Rs.	Rs.
Paper-making	{ Skilled	27	60
	{ Unskilled	15	25
Engineering	{ Skilled	30	70
	{ Unskilled	15	25
Total wages bill		4,56,739	8,98,378

50 per cent. increase granted in December 1920 (and additional sectional increases since then. Also the last full year was exceptional due to extra renovation work at the mills).

50. Usually the labour force is sufficient and is drawn from the vicinity of the factory.

51. (a) Yes.

(b) Generally speaking it takes from 2—3 men to do the work of 1 man in Europe. In addition to this there is always the irregularity of attendance to be considered.

52. We give medical attendance, and hospital free, housing for those requiring it, filtered drinking water, and other similar care and conveniences.

#### IV. Power.

53. The Titaghur Mill has steam turbines generating electricity, and the Kankinara Mill steam.

54. Sec 53. Cost per unit is 6 pies. This compares favourably with rates obtained elsewhere under similar conditions. We anticipate a reduction owing to improved steam arrangements now coming into force as part of the renovations.

55. Yes. Coal.

56. The total quantity of fuel per unit of paper is 5.6 tons per ton of finished paper, including manufacture of chemicals, soda recovery, filtration and pulp-making.

57. The coal is largely from the Bihar and Orissa coalfields and is of different qualities and grades and the prices are from Rs. 10 to Rs. 14 per ton delivered at the mills according to grade. The railway freight is Rs. 4 per ton.

58. The Company does not own or control the source of the coal, but there is no reason to apprehend any failure in source of supply.

59. Does not apply.

## V. MARKET.

## (a) Paper.

60. There are no proper records, but it is estimated that the total annual Indian production of paper has been as follows:—

	Tons.
1909—1914 . . . . .	31,000
1915—1919 . . . . .	35,000
1920—1924 . . . . .	32,000

61. It is estimated that the total Indian demand for paper of all kinds was:—

- (a) 90,000 tons yearly, including strawboards.
- (b) 80,000 tons.

62. We should anticipate with the extension of Railways and Commerce, and also very much with the extension of education, that the demand for paper in India will increase substantially.

63. The market for the Indian mills is the whole of India almost without exception, including Burma; this excludes Ceylon.

64. In the matter of Railway freight Indian mills have a certain advantage over importers for a portion of their production, but the difference in the freight rates is negligible compared with the very wide difference between the prices of imported and country-made paper. Also, this advantage is only gained for wagon load consignments, i.e., fairly large contracts, as small or miscellaneous consignments are charged for at the same rates as for imported papers. Twenty-five per cent. of our despatches to the various markets is made up of these small lots and is therefore charged at the higher rate of freight. These concessions are also not general but only to a few large up-country stations. One consideration which must not be lost sight of in this connection is the fact that India is the dumping ground for the surplus production of many mills in England, Sweden, and Germany and the question of competition up-country as well as the ports becomes very largely a question of how far these sellers or the importers concerned with them, are prepared to cut prices in order just to make sales even at a loss to the mills producing this surplus output, solely with the idea of keeping down their overhead charges, or realising cash for paper not required in their own markets.

65. It is not likely that paper will be exported from India for many years to come. In our opinion the immediate object of the industry, and those desirous of seeing expansion should be to cover all the Indian markets, as against imported, and dumped papers.

66. We supply a considerable quantity of paper to Government and details of our contracts with them since 1914 are as follows:—

	Tons.
1914-15 . . . . .	5,781
1915-16 . . . . .	5,781
1916-17 . . . . .	7,000
1917-18 . . . . .	7,700
1918-19 . . . . .	7,700
1919-20 . . . . .	8,215
1920-21 . . . . .	6,240
1921-22 . . . . .	5,660
1922-23 . . . . .	4,225
1923-24 . . . . .	3,290
1924-25 . . . . .	3,070

Prices paid to us by Government are invariably about 15 per cent. under nett market rates, and taking white printing, which forms the bulk of the business, our prices for the above periods were as under:—

	Per lb.
	A. P.
1914-15 . . . . .	2 1½
1915-16 . . . . .	2 1½
1916-17 . . . . .	2 6
1917-18 . . . . .	5 1½
1918-19 . . . . .	5 9
1919-20 . . . . .	5 9
1920-21 . . . . .	5 3
1921-22 . . . . .	7 6
1922-23 . . . . .	4 3
1923-24 . . . . .	4 1½
1924-25 . . . . .	3 10½

As a whole the prices to Government are very considerably less than those prevailing in the market.

In comparison with lowest possible market rates at the time, we calculate that our Company alone on its contracts with Government showed to Government a very large saving by the low prices charged during the war years.

In addition to showing Government these savings in price, the mills met Government's full demands upon them which were 50 per cent. in excess of those pre-war notwithstanding that the bazaars offered opportunities for very large profits and a demand much greater than the mills' capacity to supply. The mills gave Government first call upon them for war requirements.

67. (a) Certain of the newspapers use Indian-made paper by reason of the facilities which the mills give them in getting small quantities as required and in not holding shipment stocks. This demand amounted in 1923 to 700 tons. Another reason is that grass paper lasts and handles better than woodpulp papers. The other newspapers, however, use cheap mechanical woodpulp paper which is cheaper.

68. With protection, yes.

#### (b) For Pulp.

69 to 72. Not replied to except as regards No. 70. As already mentioned imported woodpulp will be required always for the manufacture of certain qualities of paper. Bamboo might under certain conditions in time replace this to some extent.

### VI. FOREIGN COMPETITION.

73. Sweden, Germany, Norway, Finland, Austria, and the United Kingdom.

74. The competition is keenest in those qualities in which the Indian mills are most interested, i.e., fine writings, printings and wrappings.

75. Mainly from Scandinavian and Finnish Chemical Woodpulp and Mechanical Woodpulp. Often also from a combination of the two. Also German paper made from all kinds of Continental pulps.



76. (I) The prices of foreign paper imported into India during the periods named were, so far as can be ascertained, as follows:—

		White printings.		Cream laids.	
		A.	P.	A.	P.
1912	. . . . .	2	0	2	4½
1913	. . . . .	2	0	2	4½
1914	. . . . .	2	0	2	4½
1917	. . . . .	7	0	7	6
1918	. . . . .	7	0	7	6
1921	. . . . .	6	6	8	6
1922	. . . . .	4	7	6	9
1923	. . . . .	4	1	4	3
1924	. . . . .	3	7	3	10

(II) The prices realised by us for the same qualities were:—

		White printings.		Cream laids.	
		A.	P.	A.	P.
1912	. . . . .	2	0	2	3
1913	. . . . .	2	0	2	3
1914	. . . . .	2	0	2	3
1917	. . . . .	7	0	7	0
1918	. . . . .	7	0	7	0
1921	. . . . .	7	9	8	9
1922	. . . . .	5	3	5	4
1923	. . . . .	4	5½	4	11½
1924	. . . . .	4	3	4	6

The prices in respect of foreign papers represent c.i.f. prices, *plus* Customs duty and landing charges, as exporters in Europe invariably quote c.i.f.

77. The Customs authorities at Calcutta and Bombay. It should be reliable if the average invoice prices for each particular quality of all imports were taken for the two months immediately preceding the time of the enquiry. Invoices or information from importers would not be reliable owing to the wide fluctuations which sometimes happen and the consequent possibility of their being able to produce current invoices which might not necessarily portray the true trend of the market as regards the prices of our imported paper. Our own information is supplied by our own salesmen and from investigation of import returns. We are also kept acquainted with the situation as regards to prices in Europe—by Paper Experts specially commissioned in England.

78. There are no Trade Journals or published prices in India except those issued privately. Our prices are regulated from time to time according to the prices of imported paper and our own cost of production. The prices at which paper is exported from London are in most cases below the cost of manufacture as quoted by European authoritative Trade Journals (see "World's Paper Trade Review," published weekly). The prices quoted in this Journal may be taken as fairly representing the prevailing rates both as regards cost of production and selling prices for the Home market as the case might be. Prices for export are generally a shade cheaper than for the Home market. Taking into consideration the cost of freight involved, paper is often delivered to Indian ports at prices representing 25—30 per cent. under delivered cost.

79. We have it on the evidence of the Trade Journals and Invoices for goods actually shipped to India that the prices at which goods are sold to

importers out here must be in the main, taking the sale individually, unremunerative to the mill selling. We know that owing to conditions peculiar to the paper industry all the world over, a mill must work fully and twenty-four hours a day owing to the necessity of a wide distribution of the heavy overhead charges if it is to bring its cost of production within reasonable range of the prevailing selling price. A paper mill in Europe is rarely regularly fully booked with orders showing market rates, but it finds it economical for the above reasons to accept orders for the balance of the output at prices under cost provided that the goods are to be sent to a distant market where the lower price will not affect the Home demand at higher rates and the stability of prices is of less concern than the maintenance of output.

#### 80. Bombay, Madras and Calcutta.

81. The dumping of paper into India by European mills since the war at low prices is merely a reversion to the policy which was in existence in the few years immediately prior to the war as described in paragraph 79, and which nearly caused the liquidation of the local mills. It must be regarded as a permanent feature as the supply of paper in Europe at present rate of manufacture must exceed the possible demand for many years to come. The position has been more accentuated since the war owing to the depreciated exchanges of certain Continental countries and the high Indian exchange.

82. The following is a comparison of the rates of freight paid on country and imported paper to the more important up-country markets. Sea freight has not been added to the rates for imported papers, because as already explained in paragraph 76, foreign quotations are invariably c.i.f. (The freight on paper in bales is 50s. per cubic ton to Calcutta.)

Rates are given per pound of paper.

	Wagon Rate.	Miscellaneous Rate.
	Pies.	Pies.
Titaghur to Delhi (country) 896 miles	1-74	3-36
*Bombay to Delhi (imported) 865 miles	...	4-3

\*Bombay is the port for imports to Delhi.

	Wagon Rate.	Miscellaneous Rate.
	Pies.	Pies.
Titaghur to Rawalpindi (country) 1,386 miles	3-87	5-64
*Karachi to Rawalpindi (imported) 897 miles	...	4-67

\*Karachi is the port for imports to Rawalpindi.

	Wagon Rate.	Miscellaneous Rate.
	Pies.	Pies.
Titaghur to Hyderabad (Deccan) (country) 969 miles	Nil.	5-42
*Madras to Hyderabad (imported) 533 miles	Nil.	2-72

\*Madras is the port for imports to Hyderabad (Deccan).

	Wagon Rate.	Miscellaneous Rate.
	Pies.	Pies.
Titaghur to Lahore (country) 1,206 miles	2-96	4-72
*Karachi to Lahore (imported) 756 miles	...	4-0

\*Karachi is the port for imports to Lahore.

	Wagon Rate.	Miscellaneous Rate.
	Pies.	Pies.
Titaghur to Allahabad (country) 508 miles	1-01	2-70
Calcutta to Allahabad (imported) 514 miles	...	2-72

83. This has been dealt with in the preceding paragraph.

84. Our salesmen report that from their own experience undoubtedly paper of Continental manufacture is coming into this country without any indication of the country of origin, and is in consequence being confused with the British product.

In this connection we quote an extract from a letter received by our London Office from the Managing Director of an important firm in England who have a very large interest in and are in close connection with the paper trade.

"Your trade is in a difficult position at the present moment and as every sheet of paper cannot be marked with the country of origin, and as it is a simple matter to change the wrapper and the label, I am quite certain that a considerable quantity of foreign paper, such as German, is being dealt with in the English market and as proof of this I saw at a large mill in the south of England, only a short time ago, a very large consignment of paper being taken from a steamer by motor lorries into the mill where the wrappers and labels were changed.

I was surprised to see it, but I had to believe my own eyes. Therefore, I have little doubt that a large proportion of the paper which is worrying you in India was made in Germany, but went to India via London, and I am afraid it will be a very difficult matter indeed, to meet competition like this as matters are at present."

We have written to our London Office asking them if they can secure us any further information on this question.

85. (a) The cost of plant and machinery is naturally high to the Indian mills by reason of the additional freight, landing, duty and erection costs. The latter is on account of the comparative slowness of erection in this country owing to the insufficiency of trained erecting labour in cases of special plant of this kind and to the need of expert supervision which costs more here than in Europe. The Titaghur Mills plant and machinery is well written down out of war profits, and there is consequently no inflation of block. Even so it is difficult to show profitable results.

(b) The cost of expert labour is also undoubtedly in this as in other industries a disadvantage as compared with European mills. This should grow less as Indian expert labour becomes more available.

(c) Taking the present day cost of labour together with extra number required to do the same work it might be estimated that the cost of labour is much about the same.

(d) As regards the collection and transport of primary raw materials we have to compare fibres of great bulk such as bamboo or grass, collected over big areas in the first place and transported by rail, with timber containing big weight in small space, and transported very largely if not entirely by water floating in the pulp-making countries. It is reasonable to anticipate, therefore, that the Indian industry must always be at a disadvantage until such time as the distances of the European mills from their sources of supply become so great as to even up the discrepancy. Comparative figures of this sort are not available, but this, combined with the dumping of German paper before the war, undoubtedly had some effect in producing the non-dividend paying condition of the mills immediately before the war. Since

that time the consumption of timber of all kinds has been so enormous in Europe that, combined with the additional cost of labour of which one hears, one sees reflection in the increased cost of pulp. Conditions in India should improve, not grow worse.

(e) Indian mills can buy auxiliary raw materials and consumable stores on practically as cheap a basis as English mills, sometimes cheaper, though for imported goods, freight and Customs duty make costs higher. In addition, Indian mills have to maintain and finance larger stocks of stores which in some cases are liable to climatic deterioration.

(f) The Indian manufacturer is slightly to advantage as regards the larger markets in the matter of internal freight on finished goods, but this question is already fully dealt with and comparisons are given in 64 and 82.

(g) Naturally Indian paper mills as in other industries have to hold several months' stock of spare parts and mill furnishings which the manufacturer in European countries does not have to do to the same extent.

(h) We do not use much imported raw material except alum on which the Custom duty is 15 per cent. on the Tariff valuation, machinery parts including felts, jackets and wires—2½ per cent. *ad valorem*, dyes 15 per cent. on Tariff valuation, china clay (occasional supplementary shipments) 15 per cent. on Tariff valuation.

To the extent of the above duties we are at a distinct disadvantage as compared with the foreign manufacturer.

(i) At the present time the raising of any capital for an industrial project in India is almost impossible, and this applies equally to pulp or paper mills. Even if this were possible the cost of raising such capital in India would to-day be probably from 2—3 per cent. higher than in Europe. The advantage, of course, would go to the Indian Capitalist.

86. (a), (b), (g) are all permanent in our opinion. As regards (d), it is not possible to say how soon or how far the cost of primary raw materials elsewhere will go but there is always the probability of their doing so while Indian costs should decrease.

As regards (f) and (h), these depend upon whatever action Government may find it possible to take to assist the industry and as regards (i) it is reasonable to suppose that the cost of raising capital in India will, judging by past experience, be generally higher than raising it in Europe.

## VII. EQUIPMENT.

87. Yes. For paper-making a complete 4 machine mill including all processes for turning country raw materials into paper is in our opinion the smallest economic unit possible.

88. Yes, for both.

89. 67 per cent. of the total capital expenditure spent on the mills was on plant and machinery.

90. Two 4 machine mills complete with grass preparing, boiling, beating and paper-making plant, causticising, chemical plant, and soda recovery. All plant of the best British makes erected at various periods from 1882 up to 1905 and modernised over the years 1921 to 1923.

91. With the elimination of dumping, or other similar forms of competition, we believe so; this is only possible since the mills were renovated.

92. Nothing revolutionary has occurred though new processes are always in course of being evolved and during the past ten years several such have been produced in various sections of the complete processes, many of which are still experimental.

93. We have since 1914 installed in the old mill electric drive, water filtration and chemical plant for the manufacture of bleach and caustic, and new modern steam boiler plant, and in both mills alterations and improvements in preparing, handling, and bleaching pulp, and other smaller items of economic and general improvement to mill plant. These, although expensive, are all either effecting actual savings, or have improved quality of output, and justified their introduction.

94. (a) For the present—No.

(b) For the present—No.

95. A large proportion of the items of such additions as have been made have had to be imported as they are produced by specialists in the trade in Europe and at present are not obtainable in India, though we understand one of the big firms of Continental makers have opened an office in Calcutta. A proportion of the auxiliary items have been made in India in our own and other workshops. Wherever possible, of course, fittings and castings are purchased locally as being the cheapest supply.

#### VIII. CAPITAL ACCOUNT.

96 and 97. (a) Nil.

(b) Rs. 12,55,896.

(c) Nil.

(d) Rs. 28,26,375.

(e) Rs. 4,30,578.

98. The above are the figures after depreciation has been written off. Since manufacture commenced Rs. 57,97,221 up to March 1923 has been written off for depreciation. In our opinion the block now stands at a very reasonable figure.

99. We regret that we have no data to enable us to reply to this very comprehensive question. As a general statement in our opinion the cost of new mills of the same size, on the same site, and working the same materials, would be not less than double our present block value.

The operating cost of a new mill depends upon many factors such as site, type of raw materials to be used, labour facilities and supply, and so forth. It seems hardly useful to make any attempts to compare what such cost might be without information as to these particulars. Speaking generally, however, it might be anticipated that a completely new modern mill ought given equal conditions, to be cheaper in operation owing to the ability to introduce into the lay out all the most useful labour and material saving devices *ab initio*.

100.

	Rs.	
1917 . . . . .	30,802	} Machinery and plant represented by these sums includes— Electrolytic Bleach Plant Water Filtration Plant Soda Recovery Plant Modernizing present Plant.
1918-19 . . . . .	1,32,369	
1919-20 . . . . .	6,59,515	
1920-21 . . . . .	5,65,477	
1921-22 . . . . .	8,68,592	
1922-23 . . . . .	5,66,102	

Funds remitted at current rates of exchange when remittances were due.

101. 17½ lakhs ordinary, authorised, subscribed and paid-up.

6 per cent. Preference

{ Rs. 8,50,000 authorised.

{ Rs. 8,35,000 subscribed and fully paid-up.

102. 6 per cent cumulative. The Preference Shares have ranked for dividend since 1899 and they are now  $1\frac{1}{2}$  years in arrears.

103. There are no Deferred Shares.

104. (a).

Date.	Capital.	SHARES.	
		Ordinary.	Preference.
		Rs.	Rs.
1882	Capital consisting of 6,000 Ordinary Shares of Rs. 100 each all issued and fully paid up.	6,00,000	..
1888	Increased by creation of 3,000 new Ordinary Shares of Rs. 100 each all issued and fully paid up.	3,00,000	..
1892	Further increased by creation of 1,000 new Ordinary Shares of Rs. 100 each, all issued and fully paid.	1,00,000	..
1899	Further increased by issue of 5,000 Preference Shares of Rs. 100 each, carrying cumulative preferential dividend of 6 per cent. per annum, all issued and fully paid up.	..	5,00,000
1902	Further increased by creation of 6,000 New Ordinary Shares of Rs. 100 each, of which 5,000 issued and fully paid up.	5,00,000	..
1905	Further increased by issue of 1,000 Ordinary Shares of Rs. 100 each, authorised in 1902, but so far unissued fully paid.	1,00,000	..
	And creation of 1,500 new Ordinary Shares of Rs. 100 each, all issued and fully paid.	1,50,000	..
	Also by creation of 3,500 Preference Shares of Rs. 100 each, carrying cumulative preferential dividend of 6 per cent. per annum and ranking for dividend <i>pari passu</i> with previous issue, of which 3,350 issued and fully paid.	..	3,35,000
	TOTAL ISSUED CAPITAL	17,50,000	8,35,000

104. (b), (c).

	Ordinary.		Preference.	
	Rs.	Per cent.	Rs.	Per cent.
1903 . .	75,000	5	30,000	6
1904 . .	75,000	5	30,000	6
1905 . .	75,000	5	30,000	6
1906 . .	87,500	5	50,100	6
1907 . .	87,500	5	50,100	6
1908 . .	87,500	5	50,100	6
1909 . .	87,500	5	50,100	6
1910 . .	87,500	5	50,100	6
1911 . .	87,500	5	50,100	6
1912 . .	87,500	5	50,100	6
1913 . .	.....	Nil.	50,100	6
1914 . .	.....	Nil.	25,050	3
1915 . .	.....	Nil.	75,150	9
1916 . .	1,05,000	6	50,100	6
1917 . .	3,50,000	20	50,100	6
1918-19 (15 months.)	9,62,500	55	62,625	7½
1919-20 .	8,75,000	50	50,100	6
1920-21 .	8,75,000	50	50,100	6
1921-22 .	2,62,500	15	20,250	3
1922-23 .	.....	Nil.	.....	Nil.
	<hr/> 42,67,500		<hr/> 8,79,275	

105. Approximately 12 per cent.

106. 8 lakhs Debentures were paid off in 31st December 1917 and 4 lakhs Debentures on 31st December 1923. The present existing Debentures are 5 lakhs at 6 per cent. repayable in 1932 and 25 lakhs at 8 per cent. repayable in 1936.

Debenture Sinking Fund was started in September 1921 and stands at present at Rs. 1,00,000 but has not been added to since owing to lack of profits.

107. Total Reserve Fund of 30 lakhs was accumulated in the years 1918-1921. This was built up from surplus profits during war years and has since all been absorbed in writing off depreciation of plant and subsequent losses during reconstruction period. The result is that our assets now stand at a proper figure.

108. No further scheme of replacement or extension is immediately contemplated nor is it considered likely that the money market at present would respond to any call for capital for this, or other industrial purposes. This position might be changed by a sufficient protective duty. Even then further extensions or improvements would not be considered necessary for the immediate present. Loans raised, however, for financing the Company over this period should be capitalised when opportunity offers.

109. See attached Forms.

110. In the years 1922-23 the cost of production was seriously affected by the fact that the mills were working at much less than the full capacity. Renovations were instituted in 1922, and the introduction of improvements in handling of stuff, and of more modern methods in both mills. These

extended into 1923, and necessarily interfered considerably with output until completion. Without exception all items were affected. They would probably have been reduced to something like the figures of 1923-24 if full output had been obtained.

111. The main reason is given below. We estimate that in future years with full capacity of working the Works cost will probably be 10—12 per cent. better. Cost of raw materials affects this question. Full capacity output will mean lower costs from the fields owing to increased collections, and if concessions in royalties can be given, with extended working period, and lower rail freights on all raw materials, this also will bring down costs proportionately more.

112. Yes. The last complete year's cost sheets are herewith produced. These are to be considered private and are not for publication.

113. The only information of which we are in possession is that obtained from personal reports and from trade reports which indicate that mill costs for white paper in England of a similar quality to that we produce is to-day round about 3½d. per lb.

This is from rough information obtained merely from trade reports as the mills in Europe naturally are not prepared to give pucca cost figures for publication.

114. The Titaghur Mills are allowed 3 lakhs per annum depreciation free of income-tax and this sum we consider ample owing to depreciation having been very fully allowed during the war period.

Rates { 6 per cent. buildings.  
7½ per cent. plant and machinery.

115. (a) No. 1—

	Rs.	Rs.
Buildings . . . . .	20,89,862	
Less for land . . . . .	1,25,000	
	<hr/>	
	19,14,862	
5 per cent. . . . .		95,743
No. 2—		
Buildings . . . . .	9,28,563	
5 per cent. . . . .		46,428
		<hr/>
		1,43,171
		<hr/>

#### Machinery and Plant.

	Rs.	Rs.
No. 1 . . . . .	41,62,623	
7½ per cent. . . . .		3,12,196
No. 2 . . . . .	25,74,807	
Less soda recovery . . . . .	7,30,054	
	<hr/>	
	18,44,753	
7½ per cent. . . . .		1,38,357
		<hr/>
		4,50,553
		<hr/>



*Stationary Plant and Machinery.*

	Rs.	Rs.
No. 2—		
Soda recovery . . . . .	7,30,054	
7½ per cent. . . . .		54,754

*Other Assets.*

	Rs.	Rs.
Furniture . . . . .	1,11,293	
5 per cent. . . . .		4,565
Motor cars . . . . .	38,605	
15 per cent. . . . .		5,790

115. (b).

	Rs.
Buildings . . . . .	74,660
Machinery . . . . .	2,17,102
Furniture . . . . .	4,771
Motor car . . . . .	4,852

116. We regret we cannot answer this question.

117. (a) 17,000 tons—Rs. 18.31 per ton.

(b) 20,000 tons—Rs. 15.07 per ton.

*Working Capital.*

118. (1) Say 60 lakhs.

(2) Say a further 6—10 lakhs.

119. We find it necessary to borrow to provide working capital.

120. 70 lakhs, Bank rate.

121. Works cost of one month's output is approximately 7 lakhs excluding overhead charges.

122. Average value of finished paper stocks is Rs. 12½ lakhs. Two months between production and payment.

123. Yes, coal and raw materials generally average alone Rs. 20—25 lakhs.

*(III) Agency Commission and Head Office Expenses.*

124. Managing Agents in Calcutta of the Company are F. W. Heilgers &amp; Co., whose Head Office in Calcutta is the registered office of the Company.

125. (I) About Rs. 1,20,000 per annum including branches.

(II) Fixed monthly allowance of Rs. 2,000 a month and 10 per cent. on nett profits.

126. By the Articles of Association, 10 per cent. on nett profits available for dividends.

127. (I) Rs. 7.7 on present working.

(II) Rs. 1.43 on present output.

Rs. 1.25 on full capacity.

Rs. 6.6 on full capacity plus commis-

## X. MANUFACTURERS' PROFIT.

128. 10 per cent. on ordinaries, no deferred shares exist.
129. (a) Preference Shares at, say, 8 per cent.  
(b) Debentures at, say, 7 per cent.
130. Not less than 10 per cent.
131. (a) Rs. 11.25 on present output, Rs. 9.75 on full capacity.  
(b) Rs. 3.25 on present output, Rs. 2.75 on full capacity.  
(c) Rs. 14.75 on present output, Rs. 12.75 on full capacity.

## IX. CLAIM FOR PROTECTION.

132. (a) The industry undoubtedly possesses an abundant supply of raw materials either already developed or possible of development.

(b) Power is dependent largely on the price of the coal, but taking conditions as normal a full supply of coal at reasonable rates should be always available for the present mills. The power question in the cost of a new concern would depend entirely on the local conditions.

A supply of labour for the present industry is sufficient. Any new concern will undoubtedly have to train labour, but there is no reason to believe they could not do so in time in the same way that the present mills have done. As regards the supplies of casual labour this would also be dependent upon local conditions. In our opinion the Indian market, properly protected, should be sufficient for taking off the production of a considerably increased industry.

(c) At the present moment it seems that conditions are with us again similar to those prevailing before the war when the development of the industry was stopped, and when it seemed as if the industry would be closed down by the foreign competition. Dividends then had not been paid for 2½ years simply owing to the competition of German dumped papers and the same conditions are now being repeated. Unless steps are taken to check this by increasing the present protection, the industry cannot increase, and mills will be forced to close down.

(d) It is difficult to say at present what the trend of wholesale prices in the paper trade are likely to be, but it is reasonable to suppose that, if time is given to the Indian mills to build up their reserves again, and to develop full sources of raw material, so as to bring down costs of these, or to develop fresh sources, eventually this industry will be able to compete in India for the Indian market in face of fair foreign competition. The industry has not yet recovered from high costs resulting from post-war conditions and is also suffering from dumping by competitors.

133. (a) At the present moment the production of the Indian mills is not at their full capacity and they can undoubtedly increase their total output, tending to economy in costs of production.

(b) The present mills could not ever supply the whole needs of the country but there is no reason to believe that if foreign papers were excluded sufficiently to bring the whole consumption of suitable classes of paper within the scope of supply by Indian mills, that further mills would not be erected in course of time to supply the total consumption.

134. When it is considered that the paper industry employs annually at least 50,000 workers, that it supplies a very large tonnage of traffic annually to the various railways, that it consumes not less than a hundred thousand tons annually of coal, which entails the employment of the labour necessary for mining it, and large quantities of raw materials such as limo, and country china clay, that it is the chief purchaser of rosin produced in the country, and that by royalties, taxation, and in other ways, the industry adds to the revenue of the country, it may be fairly claimed that it is of importance on national grounds and deserves protection apart from economic

considerations. Also it is proved during the war, that the existence of paper mills as an essential industry is vital to the country. Army, Railways, Posts and Telegraphs, Hospitals (Civil and Military), Publicity Departments and Indian States and Stores Departments were all chiefly dependent on the Indian mills during this period for their main supplies. The Ceylon and Straits Settlements Governments had also to indent and contract at times. Nearly all the newspapers had to depend on us to keep them going. It is safe to state that if the Indian mills had not been there to give first call on their production to these public requirements throughout the war there would have been enormous disorganisation.

135. The question is not understood except in so far that it provides an outlet for raw materials produced in the country which otherwise would not be used, and that it is an industry which Indian labour takes a liking to and can acquire a knowledge of. It is an industry essential for the progress of any nation.

136. Protective duties should be imposed on all kinds of paper. This in our opinion is necessary because otherwise the tendency will be for the country to become flooded with low class papers, and so defeat the object of the tariff on higher grades, which is to develop the industry to supply all Indian requirements.

At present customs duty is collected on imports of paper on a tariff basis, the tariff being revised as may be necessary every year on the first of January. The rates in the tariff represent the average prevailing wholesale price at which paper is being sold in the bazars at the principal ports such as Calcutta and Bombay, and these rates are ascertained by the customs authorities through the Director General of Commercial Intelligence. This means that duty is levied according to the real commercial value of the goods in India and not on invoice c.i.f. value.

In praying for a protective duty of 25 per cent., it is with the understanding that this system of a tariff scale based on Indian market values will be continued, otherwise 25 per cent. on an *ad valorem* basis would be insufficient.

Some Native States are getting supplies coming in through British ports free of duty.

137. (a) It is impossible to say what may happen in the future in the matter of exchanges. If, however, the need should arise from such a cause, or from (b) or (c) we take it that the matter could be reconsidered in the light of such fresh factors as may arise.

138. The amount of protection the industry is receiving at present is 15 per cent. on account of the customs duty levied on imported paper, plus Rs. 2-8 per ton cost of landing.

We have not considered the protection, if any, offered by cost of freight, etc., from country of production to India, because as already stated, exporters in Europe make their quotations c.i.f. and they have been regarded by us as such throughout.

139. 25 per cent. The reason for proposing the increase from the present 15 to 25 per cent. is that it is found at present that imported papers are, in spite of the present duty, being sold at a strongly competitive price in all the Indian markets, and rates which we have reason to believe the paper is not capable of being produced at. It is considered that the extra 10 per cent. should assist to reduce such forms of competition to a minimum as it will probably make the loss on such importations large enough to discourage the trade in this direction. 25 per cent. protection is necessary to enable the mills to maintain prices near present levels.

140. The industry immediately before the war, as already explained above, was in a very serious condition, largely as the result of the activities of the German Commercial Attaché to the Consulate General, this being one of the trades which the Germans were laying themselves out to capture at that time. The progress of the war staved off the danger of destruction of the industry

by this competition and during the war the industry had a short period of prosperity. During this time they were able to make up to the shareholders for the previous lean years, to pay off their arrears of Preference interest, to pay off some Debentures and to provide Reserve and Development funds. These latter have since been expended in the adjustment of subsequent post-war prices, and in bringing up the mills to a comparatively modern work and plant. Without this latter we could not now hope to compete even with the duty asked for. The industry is now again faced with the recrudescence of the dumping competition from which they were suffering before the war, based possibly upon the detailed information of the markets supplied to Europe by the Germans before the war, or at any rate working on similar lines, and having every appearance of the likelihood of leading to the same results, in spite of the efforts made by the mills during this short period of prosperity to improve their plant and conditions, and their supplies of raw materials.

141. It should be possible to reconcile the request for protection both for finished paper and for pulp. From the national point of view they are undoubtedly both most important. The only consideration which the paper makers would urge is that the protection on pulp be postponed for 2 years, which is a minimum period in which additional plant for the pulp industry could be erected, and during which period therefore it is unreasonable that the paper industry should be penalised with an additional charge upon part of its raw material. It will also give time to the paper mills to make such modifications in their systems as might be necessary to enable them to adjust their working to the increased cost of imported pulp when the duty is imposed. Under these circumstances the paper mill industry would be willing to agree at the end of 2 years from time of the added paper protection to a duty of 20 per cent. being imposed also on imported woodpulp, with the object of assisting the development of this industry in the country also.

From the national point of view there is in the opinion of the paper mills little to choose between the two industries, except, for the fact that in the papermaking industry there is an already established and very valuable asset to the industry of the country, whereas the pulping industry as such has yet some considerable way to go before its establishment can be considered accomplished.

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## FORM I.

Statement showing the Total Expenditure incurred on the production of paper during certain years.

(See Question 9.)

	1913-14.	1921-22.	1922-23.	1923-24.
	Rs.	Rs.	Rs.	Rs.
(1) Primary Raw Materials . . . . .	19,34,043	48,19,750	14,31,310	17,88,321
(2) Purchased Pulp . . . . .			24,90,465	15,91,766
(3) Auxiliary Raw Materials . . . . .	8,79,470	35,30,807	14,86,155	14,05,441
(4) Mill Labour . . . . .	6,09,854	11,79,400	10,78,117	11,54,859
(5) Power and Fuel . . . . .	5,38,007	11,44,020	12,45,075	11,45,882
(6) Ordinary current repairs and maintenance of buildings, plant and machinery .	4,23,177	9,38,656	8,21,502	7,90,549
(7) General Services, supervision and local office charges . . . . .	31,909	1,41,619	1,35,934	1,07,927
(8) Miscellaneous, e.g., rent, Municipal Taxes, Insurance, etc. . . . .	60,475	1,36,316	1,94,512	772
(9) Any other single item not enumerated above which amounts to 5 per cent. or more of the total expenditure.	(2,42,138)	(7,20,054)	(5,50,035)	1,45,351
				(5,08,583)
<b>TOTAL</b> . . . . .	47,19,073	1,26,10,422	94,33,105	86,35,251
<b>Gross</b> . . . . .	17,630	15,750	13,312	15,585
<b>Nett</b> . . . . .	17,145	15,346	12,888	15,036
<b>INTEREST</b> . . . . .	(1,87,166)	(5,85,257)	(6,57,085)	7,56,047
<b>TOTAL</b> . . . . .	49,06,239	1,31,95,679	1,00,90,190	93,91,298

Total production of paper for the year

## FORM II.

Statement showing the works cost per ton of unbleached pulp.

	1913-14.	1921-22.	1922-23.	1923-24.	(Financial year 1st April to 31st March.)
(1) Primary Raw Materials . . . . .	..	Rs. 126,403	Rs. 153,378	Rs. 155,469	
(2) Auxiliary Raw Materials . . . . .	..	95,675	89,335	77,312	
(3) Mill Labour . . . . .	..	18,544	18,159	14,223	
(4) Power and Fuel . . . . .	..	21,241	21,327	17,194	
(5) Ordinary current repairs and maintenance of buildings, plant, machinery.	..	5,313	12,889	5,371	
(6) Miscellaneous, e.g., rent, Municipal taxes, insurance, etc.	..	..	..	..	The charges against these items are all included in On Cost Charges and are charged direct to the cost of Finished Paper.
(7) General services, supervision and local office charges .	..	..	..	..	
(8) Any other single item not enumerated above which amounts to 5 per cent. or more of the total expenditure.	..	..	..	..	
<b>TOTAL</b>	..	267,176	295,088	269,569	
* Credit for materials recovered (if any) . . . . .	..	..	..	..	
<b>NET TOTAL</b>	..	267,176	295,088	269,569	
Total Production of Unbleached pulp for the year . Tons	..	6,306,629	4,378,127	8,671,159	

\* Already deducted from cost of Auxiliary Raw Materials

## FORM III.

Statement showing the approximate works cost per ton of bleached pulp.

(See Question 108).

	1913-14.	1921-22.	1922-23.	1923-24.	(Financial year 1st April to 31st March.)
		Rs.	Rs.	Rs.	
(1) Manufactured Unbleached Pulp . . . . .	..	..	..	..	
(2) Purchased Unbleached Pulp . . . . .	..	840-000	291-670	318-988	
(3) Auxiliary Raw Materials . . . . .	..	140-000	24-000	20-000	
(4) Mill Labour . . . . .	..	2-200	2-010	1-688	
(5) Power and Fuel . . . . .	..	9-000	8-350	6-337	
(6) Ordinary current repairs and maintenance of buildings, plant and machinery.	..	7-750	7-100	5-687	
(7) General services, supervision and local office charges.	..	..	..	..	Included in On Cost Charged and charged direct to Cost of Finished Paper.
(8) Miscellaneous, e.g., rent, Municipal taxes, insurance, etc.	..	..	..	..	
(9) Any other single item not enumerated above which amounts to 5 per cent. or more of the total expenditure.	..	..	..	..	Ditto.
TOTAL . . . . .	..	998-950	333-130	352-700	

## FORM III (b).

Statement showing the approximate works cost per ton of Bleached Pulp.

(See Question 109.)

	1913-14.	1921-22.	1922-23.	1923-24.	
(1) Manufactured Unbleached Pulp . . . . .	..	Rs. 311-705	Rs. 344-269	Rs. 316-961	
(2) Purchased Unbleached Pulp . . . . .	..	..	..	..	
(3) Auxiliary Raw Materials . . . . .	..	140-000	24-000	20-000	
(4) Mill Labour . . . . .	..	2-200	2-010	1-688	
(5) Power and Fuel . . . . .	..	9-000	8-350	6-337	
(6) Ordinary current repairs maintenance of buildings, plant and machinery.	..	7-750	7-100	5-687	
(7) General service, supervision and local office charges .	..	..	..	..	Included in on Cost Charges and charged direct to cost of Finished Paper.
(8) Miscellaneous, e.g., rent, Municipal taxes, insurance, etc.	..	..	..	..	
(9) Any other single item not enumerated above which amounts to 5 per cent. or more of the total expendi- ture.	..	..	..	..	Dicto.
TOTAL . . . . .	..	470-655	385-729	350-673	



## FORM IV (a).

Statement showing the works cost per ton of Finished Paper.

	1913-14.	1921-22.	1922-23.	1923-24.
	Rs.	Rs.	Rs.	Rs.
(1) Primary Raw Materials . . . . .	112-805	314-072	111-058	118-936
(2) Purchased Bleached Pulp . . . . .			193-240	105-864
(3, Auxiliary Raw Materials . . . . .	51-296	230-067	115,313	93-472
(4; Mill Labour . . . . .	35-570	76-854	83-637	76-906
(5) Power and Fuel . . . . .	31-380	74-548	96-607	76-209
(6) Ordinary current repairs and maintenance of buildings, plant and machinery . . . . .	24-682	61-166	63-742	52-557
(7) General services, supervision and local office charges . . . . .	1-861	9-228	10-547	7-118
(8) Miscellaneous . . . . .	3-527	8-883	15-092	9-519
<b>TOTAL</b> . . . . .	261-121	774-818	689-232	540-481
Credit for Materials recovered (if any) . . . . .	..	..	..	..
<b>NETT TOTAL</b> . . . . .	..	..	..	..
<b>Total Production of Finished Paper for the year</b> . . . . . Tons	17,145	15,346	12,888	15,036

## FORM IV (b).

Statement showing the works cost per ton of Finished Paper.

(See Question 109.)

	1913-14.	1921-22.	{ 1922-23.	{ 1923-24.
			Rs.	Rs.
(1) Manufactured Bleached Pulp . . . . .	..	..	385	350-673
(2) Purchased Bleached Pulp . . . . .	..	..	..	..
(3) Auxiliary Raw Materials . . . . .	..	..	48	44-200
(4) Mill Labour . . . . .	..	..	28	17-994
(5) Power and Fuel . . . . .	..	..	138	74-388
(6) Ordinary current repairs and maintenance of buildings, plant and machinery . . . . .	..	..	84	45-127
(7) General services, supervision and local office charges . . . . .	..	..	112	67-460
(8) Any other single item not enumerated above which amounts to 5 per cent or more of the total expenditure.	..	..	..	..
<b>Total</b> . . . . .	..	..	797	599-842
Credit for Materials recovered (if any) . . . . .	..	..	..	..
<b>NET TOTAL</b> . . . . .	..	..	797	599-842

## FORM V.

## RECOVERED SODA.

Statement showing the works cost per ton of Manufacturing certain Chemicals in Mill.\*

(See Question 109.)

	1913-14.	1921-22.	1922-23.	1923-24.
(1) Materials . . . . .	..	..	..	No value.
(2) Mill Labour . . . . .	..	..	..	3.4
(3) Power and Fuel . . . . .	..	..	..	30.2
(4) Ordinary current repairs and maintenance of buildings, plant and machinery . . . . .	..	..	..	11.9
(5) General services, supervision and local office charges . . . . .	..	..	..	..
(6) Miscellaneous, e.g., rent, Municipal taxes, insurance, etc. . . . .	..	..	..	..
(7) Any other single item not enumerated above which amounts to 5 per cent. or more of the total expenditure. . . . .	..	..	..	..
<b>Total</b> . . . . .	..	..	..	45.5
<b>Total production of Recovered Soda for the year</b> . . . . . Tons	..	..	..	746

\* A separate Form will be used for each Chemical manufactured.

## FORM V.

## PRODUCTION OF CAUSTICISING CAUSTIC.

Statement showing the works cost per ton of manufacturing certain Chemicals in Mill.\*  
(See question 109.)

	1913-14.	1921-22.	1922-23.	1923-24.
	Rs.	Rs.	Rs.	Rs.
(1) Materials . . . . .	..	..	247.18	220.5
(2) Mill Labour . . . . .	..	..	5.49	5.5
(3) Power and Fuel . . . . .	..	..	32.95	13.6
(4) Ordinary current repairs and maintenance of buildings, plant and machinery.	..	..	3.42	3.0
(5) General services, supervision, and Local office charges . . . . .	..	..	..	..
(6) Miscellaneous, e.g., rent, Municipal Taxes, insurance, etc. . . . .	..	..	..	..
(7) Any other single item not enumerated above which amounts to 5 per cent. or more of the total expenditure.	..	..	..	..
TOTAL	..	..	289.04	242.6
Credit for materials recovered (if any) . . . . .	..	..	..	..
NET TOTAL	..	..	289.04	242.6
Total Production of Causticised Caustic for the year . . . . . Tons	..	..	734,689	2,578,000

\* A separate Form will be used for each Chemical manufactured.

## FORM V.

## PRODUCTION OF E. B. CAUSTIC AND BLEACH.

Statement showing the Works Cost per ton of manufacturing certain Chemicals in Mill.\*

(See question 109.)

	1913-14.	1921-22.	1922-23.	1923-24.
	Rs.	Rs.	Rs.	Rs.
(1) Materials . . . . .	..	..	49-59	42-4
(2) Mill Labour . . . . .	..	..	7-66	7-1
(3) Power and Fuel . . . . .	..	..	24-14	26-5
(4) Ordinary current repairs and maintenance of buildings, plant and machinery . . . . .	..	..	29-20	39-0
(5) General services, supervision and local office charges . . . . .	..	..	3-85	2-5
(6) Miscellaneous, e.g., rent, Municipal taxes, insurance, etc. . . . .	..	..	..	..
(7) Any other single item not enumerated above which amounts to 5 per cent. or more of the total expenditure. . . . .	..	..	..	..
TOTAL	..	..	134-44	117-5
Credit for materials recovered (if any) . . . . .	..	..	..	..
NETT TOTAL	..	..	134-44	117-5
Total Production of Bleach and Caustic for the year . . . . .	..	..	1,801-393	2,568-5
Caustic . . . . .	Tons	..	539-276	744-2
Bleach . . . . .	"	..	1,262-117	1,824-3
Cost per ton Bleach . . . . .	Rs.	182	130	116
" " Caustic . . . . .	"	230	137	123

\* A separate Form will be used for each Chemical manufactured.

*Statement II.—Letter from the Titaghur Paper Mills Company, Limited,  
dated 16th July, 1924.*

The statements made by Messrs. John Dickinson & Co., in their letter of the 24th June, have been brought to our notice.

With regard to their heading No. 1, *Practical Training*, we have already brought into existence a very considerable force of trained Papermakers in all the Indian mills, and though the supervisory staff is still required, yet undoubtedly a day is coming when they will be able to be reduced to a minimum, and when the paper industry will be more and more run entirely by Indians, except for a few very highly trained Technical Advisors to keep in touch with the latest European methods. In course of time when the educated Indian interested in papermaking has taken to going home to make himself au fait with the most efficient modern and European methods, even these billets might become open to them.

Messrs. John Dickinson & Co. should know, if any one, that Technical Colleges and Universities will never make a papermaker, but only practical experience in various types of mills from early youth for a considerable term of years.

In the meantime we have men in every Department of the Works who are trained Indians capable of running such Departments with comparatively little supervision.

No. 4. We do not agree that the area in which developments can take place is a comparatively small one. During the past few years we have been informed of not less than 5 places in India at which the manufacture of pulp and paper from bamboo and/or grass is projected, and in each of which to the best of our information the conditions mentioned exist, at least sufficient to make the establishment of a factory possible. It is reasonable to suppose that there are others not yet prospected.

No. 5. (1) We do not agree. As we have stated in our written evidence the market for each of the Indian mills is the whole of India already, and the result of the imposition of a protective duty would in our opinion be exactly the opposite of that claimed by Messrs. Dickinson & Co.

No. 5. (2) This is no new point but was raised first of all by the Indian Industries Commission in 1916 by Sir Thomas Holland. The understanding then arrived at was that the incidence of an import duty on the individual user would, owing to the relatively low value of the article itself, be so infinitesimal that it would in no way interfere with the use of paper for either Literature, Business, or more important Education. The total proportion of the cost of writing materials as compared with the cost of the other items which together constitute the necessary paraphernalia of Education, including School Houses, Teachers, Furnishings, Inspectorates, etc., is so small that an extra 10 per cent. or so will not in any way retard the spread of Education. The same applies also to most other direction in which the use of paper is an ingredient.

The conclusion of the Indian Industries Commission was that even if the comparatively small number of people interested in the various uses of paper in the country, should have to pay a little more, yet this would be a much lesser evil than the danger to the country, and the loss to Revenue and the Railways, entailed by letting down the industry to its destruction. The correctness of this contention was proved over and over again during the War and the economic consideration still remains in full force.

No. 6. With regard to the 90 per cent. of the people of India whom he refers to, if this is a correct estimate of those not consuming paper, it is not so much because they cannot afford it, but because they are entirely illiterate, or for other similar causes.

In any case it is obvious that the average consumption per head should be looked at proportionately, in different countries, to the average income per head.

It is the hope of the Indian mills that this<sup>1</sup> may be remedied as soon as possible, and on this one point we think that probably Messrs. Dickinson and ourselves can be in accord.

No. 7. Here again we cannot agree to the statement made. We ourselves have supplied continuously for many years the full requirements of several of the largest newspapers, who prefer to use our paper even at slightly increased price, and apparently are still very flourishing.

We do not deny, however, that some of the big newspapers prefer to use foreign mechanical pulp papers, but we would suggest they are perfectly free to do so, or even to continue to get their paper at the old rate provided they can give a satisfactory undertaking under license that such paper as they import shall be for their own consumption only.

No. 8. The Indian mills can make a very wide range of anything except mechanical pulp papers, but naturally try to confine themselves to comparatively as small a number of grades as possible. Also as there are to-day some 60,000 tons of imported paper more than the mills can make, naturally a great deal of it comes in of all grades.

We cannot at all say where the writer of the rest of this para. obtained his information. It is certainly untrue.

The Indian Government, the Madras Government, the Bombay Government, the Bihar and Orissa Government, the United Provinces Government, the Burma Government, and many Native States are all using Indian paper for very nearly the whole of their requirements. The papers supplied cover very nearly all the Government's range of requirements, and the English mills in commenting in the *World's Paper Trade Review* on this particular tender admitted only a few months ago that the Indian mills was equal in quality to their own.

Nos. 10 and 11. Here again it seems that the actual increase in the cost of paper would be so infinitesimal as compared with the cost to the industries mentioned of the other necessities in their trade, as not to constitute any menace to their prosperity, or hardly to make any appreciable difference.

No. 12. Would seem to wish to pre-judge the issue for the Tariff Board.

No. 13. Here again the writer has obviously been either grossly misinformed or is deliberately not stating what is the case.

As to improving the quality, I think the comments above under 8 provide independent evidence as to what the mills are doing.

As regards the libellous statement contained in the 2nd paragraph our reply to Questions Nos. 125 and 126 of your questionnaire is sufficient reply.

No. 14. The answer to this statement, which is also as incorrect as the rest, is that for the past two years our prices have been held up at anything from half an anna to nine pies per pound over imported papers, because of the disinclination of the mills not to sell below working cost. As cost has come down, some of the mills prices have come down to some extent, but as regards job lots, which of course every mill all over the World cannot help producing to some extent, the percentage of these as regards at any rate the Titagarh Mills is small and certainly never sufficient at any rate to affect the market in the manner suggested. The chief offenders in this respect are Dickinsons themselves who buy cheap lots all over the Continent and dump them here.

No. 16. This again is a misrepresentation of the actual facts. It is not that we are asking for protection from ordinary fair competition but from the selling of imported papers at prices below those at which they can be produced at the country of origin.

Nos. 17 and 18. Does your correspondent suggest that the closing down of the 6 British concerns which he mentions was caused by the same "Succession of Misfortunes" as he refers to under 17?

On the other hand it would seem that the fact that the Indian mills are still going, and have up to now managed to survive where many other mills have had to close, is an evidence that at least much of the administration criticised by your writer would seem to have been in the right direction.

The raising of money at the moment to support an extension of the industry would we agree be a matter of difficulty, but not from the causes suggested. We are certain that if an increase in the protective duty were to enable existing mills to show a steady dividend in the earning basis the industry that fresh capital would be forthcoming before very long for expansion of the Industry.

*Statement III.- Letter from the Titaghar Paper Mills Company, Limited, dated 19th July 1924.*

In submitting our previous evidence, we have been compelled by the form of the questionnaire to answer the questions put by you, which form of evidence is not from our point of view the most convenient for basing a claim to protection. We will therefore endeavour to lay before you the exact grounds on which we now base our claim.

The Tariff Commission lay down three stipulations for industries claiming protection.

As regards the first of these, we think that we have given sufficient evidence in reply to the questionnaire to prove that the paper industry has natural advantages and has claims to be allowed to re-establish itself as strong at least as those put forward by the steel industry.

As regards the second stipulation, we wish definitely to record here that without protection the present company can hardly hope to survive, at any rate in its present form, unless some startling and totally unexpected reversal of present tendencies takes place. The existence of the Company depends upon the success of our claim to protection over the present most difficult period. We believe on the other hand that with protection we can both pull round ourselves and at the same time see other companies, particularly for the manufacture of pulp, come into being.

Thirdly, our production costs have already come down so heavily and are still expected to be so further reduced that they will be quite good compared to those of foreign mills, and we believe that if India were not treated as a dumping ground, we could compete on equal terms with our competitors.

We base our claim to protection and support the contention that we could compete eventually against all reasonable competition on the subjoined figures.

*Fair Return on Capital.*—We think you will agree that the figure of our Block account is by no means inflated and that mills to turn out an equal quantity of paper could not be erected at anything like the present book figure of our mills.

During the last two years the mills have incurred very heavy losses, which they are now financing in addition to the capital normally employed in the business.

We consider we should be perfectly justified in asking for a fair return of interest on the full capital employed in the business, viz., Rs. 15,32,800, vide the last published report for the half-year ended 30th September 1923.

In case, however, we may be accused of asking the public to pay for the sake of providing the shareholders with handsome profits or an early resumption of dividends, we submit our claim on the basis of a fair capitalisation of Rs. 130 lakhs, being in round figures the capital employed less the loss shown in the balance sheet.



A fair overall rate of interest in view of conditions in India to-day would be 8 per cent. Although a greater yield is naturally expected on Ordinary Shares, Debenture, Loan and Preference capital should require a lesser figure. Owing to circumstances the Company were compelled to raise Debentures at 8 per cent. and the recent prevalence of high Bank rates has also hit the company hard, especially in view of the heavy finance required to carry high priced stocks and raw materials.

At 8 per cent. the return on a capitalisation of Rs. 130 lakhs would be Rs. 10,40,000 per annum.

Putting this another way and assuming a recapitalisation on the basis of—

	Rs.
Debentures . . . . .	30 lakhs at 7 per cent.
Preference shares . . . . .	30 lakhs at 8 per cent.
Ordinary shares . . . . .	50 lakhs at 10 per cent.
Miscellaneous Finance . . . . .	20 lakhs at 6 per cent.

the total interest requirements would be Rs. 10,70,000.

Allowing a reasonable reduction for ordinary trade liabilities, the figure of 8 per cent. per annum is we submit a fair return to expect on the company.

*Depreciation.*—The depreciation allowed by the Income-tax authorities is Rs. 3,01,000 per annum, which we consider reasonable in view of the written down value of our Block and the modern nature of much of the new plant installed in the reconstruction and which we are taking for purposes of argument.

The attached figures of costs and selling prices indicate very clearly the nature of our troubles. Summarised they may be shown as follows:—

— —	Year 1923-24.	April 1924	May 1924	June 1924	Savings anti- cipated on June 1924
Work cost . . . . .	3-800	3-483	3-372	3-267	2-769
Total cost . . . . .	4-102	3-647	3-531	3-432	2-916
Fair return on Capital . . . . .	-494	-463	-448	-463	-413
Depreciation . . . . .	-143	-134	-129	-134	-119
<b>TOTAL COST</b> . . . . .	<b>4-739</b>	<b>4-244</b>	<b>4-018</b>	<b>4-029</b>	<b>3-448</b>
<b>AVERAGE SELLING PRICE.</b>	<b>4-028</b>	<b>3-944</b>	<b>3-833</b>	<b>3-660</b>	

It will be seen therefore that although big reductions in cost have been effected, prices have been falling also and we have not been able to catch up. Had we been able to attain the prices reached during 1923-24, we should in May and June have been obtaining a fair return.

The fall in prices has robbed us of this and the protection we ask for is the margin between the two figures, viz., 10 per cent. on an average sale price of As. 3-8 or As. 3-666. This amounts to 4-4 pies only per lb. of paper and would bring the selling price to As. 4.

If an additional 10 per cent. duty is imposed we do not look to get this figure of As. 4 per lb. of paper but we do look to stabilise sales round about the present prices, thereby enabling us to fill our works with orders at present prices.

We realise that it is incumbent upon us to reduce costs further and we can see our way next year on full working to reduce our costs to a figure which, if prices are stabilised on the present basis, will enable us to survive.

With regard to the third condition of the Tariff Commission that the industry should be able eventually to stand on its own feet, we would point out that the industry stood for 30 years before the war though with extreme difficulty at times and with the awakening of India to industrial conditions and the special natural necessity of a paper industry to any advancing nation we see no reason on broad lines why under normal conditions the industry should not again exist without protection.

Turning again to our figures we have every reason to believe that within two years we shall be able to reduce costs, including a fair return on capital, to the last figure shown, viz., As. 3.44 per lb., which is some 3 pices below our present selling rate and about the level of present imported prices.

As costs in Europe of grass papers are not less than three pence half penny or say As. 3½, and as all authorities are agreed that prices are not likely to go any lower, seeing the unprecedented nature of the slump of paper mills in Europe, and the present unremunerative nature of business, we believe that the present level is likely to be maintained.

The factor of a hardening exchange may reduce sale prices a little, a further reason for asking protection. They will also of course cheapen our imported materials, but these however form a small portion of our expenses.

Any reductions in the world's paper markets such as cheaper pulp, chemicals, machine furnishings and so forth will affect us as much as any other mills wherever placed and we have sufficient confidence to believe that given temporary protection we can as before meet world competition unless at any time a slump in trade causes a repetition of the present dumping tactics.

We base our claim on the above figures and are prepared to support them with any further evidence required.

कन्यामन नयन

*Statement IV.—Note on the export of bamboo pulp handed to the Tariff Board by Sir W. Carey on behalf of the Titaghur Paper Mills Company, Limited.*

Until we have had an opportunity of going into the whole question thoroughly from the point of view of a large export, it is difficult to offer a definite opinion as to the possibility of bamboo pulp for export on such a scale; but we do think that with the inexhaustible supplies of bamboos in close proximity to suitable sites for the erection of mills and with plentiful supplies of labour,\* which for bamboo (see footnote) should be proportionately cheaper than for some of the other fibres, there is every reason to expect that as the industry develops pulp will be produced at a price such as will enable it to compete favourably with Continental and Canadian pulp, particularly in the markets of Japan, China and Australasia where it would have an advantage per ton in sea freight.

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\* Labour per ton of bamboo pulp should be very much cheaper than for grass, as little or no picking and sorting would be necessary and the larger bulk and greater density would make its handling a simpler matter. In these days bamboos are fed into the crusher whole, and after that very little labour is involved in the actual manufacture.

For the purpose of our present estimates, we have only gone into the question so far as our own mills' requirements are concerned, but even such figures with the protection asked for compare favourably with the price of imported pulp, especially when the anticipated lower working costs referred to above are taken into account. On the establishment of an independent industry, mills would naturally be run on a much larger scale and costs would be reduced in consequence.

As regards exports of Canadian pulp to Japan and China, there is already a steadily growing shortage of pulp in the United States of America which would certainly very quickly minimise competition in the East.

*Statement V.—Statement showing capital expenditure of each of the Mills under the Titaghur Paper Mills Company, Limited, handed to the Tariff Board by Sir W. Carey on behalf of the Company.*

	No. 1 Mill.	No. 2 Mill.	Total.
	Rs.	Rs.	Rs.
1917 . . .	1,007	29,795	30,802
1918-19 . . .	1,00,003	32,366	1,32,369
1919-20 . . .	5,20,090	1,39,425	6,59,515
1920-21 . . .	4,18,068	1,47,409	5,65,477
1921-22 . . .	2,53,688	6,14,904	8,68,592
1922-23 . . .	3,72,820	1,93,782	5,66,602
	<u>16,65,176</u>	<u>11,57,681</u>	<u>28,22,857</u>

1923-24. To above is to be added cost of new Steam Boiler Plant at No. 1 Mill, Rs. 5 lakhs.

*Statement VI.—Note, dated 30th August 1924, submitted by the India Paper Pulp Company, Limited, and endorsed by the Titaghur Paper Mills Company, Limited.*

See Statement VII of the India Paper Pulp Company, Limited.

## THE TITAGHUR PAPER MILLS Co.

B.—ORAL.

### Evidence of Sir WILLOUGHBY CAREY, Mr. E. A. BELLAMY and Mr. A. W. WOOD, recorded at Simla on the 23rd July 1924.

*Sir W. Carey.*—May I ask permission to put in two more statements? One \* is a reply to the statement which has been made by Messrs. John Dickinson & Co. and the other † is an attempt to make a fresh summary of the claim or request for protection in a short form with proposed new capital figures, basing it on the position of the industry as it stands at present.

*President.*—Are you appearing only on behalf of the Titaghur Paper Mills Co. or also on behalf of the Association?

*Sir W. Carey.*—Only Titaghur.

*President.*—I gather that the Association does not intend to send in any reply apart from those of the individual companies.

*Sir W. Carey.*—No.

*President.*—In answer to Question 7 you say “in selecting the site of a paper mill in India it is necessary that it should be as far as possible central to its markets and its raw materials, with a plentiful supply of clean fresh water all the year round. Proximity to coal or other fuel is also essential, and the vicinity of a sea port for the import of materials and machinery and the export of finished product by coastal routes.” If all these things are necessary, there are very few sites suitable for a paper factory in India.

*Sir W. Carey.*—What I think was intended here is that wherever possible they are all advisable.

*President.*—That is to say, in your answer the words “necessary” and “essential” are not to be literally construed. As the answer stands, it puts the case very high indeed.

*Sir W. Carey.*—It does. These are the ideal conditions which in a country like India cannot always exist.

*President.*—Take your own mill in Calcutta. You are relatively near your coal and your port and also near a large market, but you are not near your supplies of raw materials. On the other hand, an up-country mill would be far from its coal and market.

*Sir W. Carey.*—It is true.

*President.*—Therefore I should like to get some idea which of these various factors is the most important. It is obvious that you must have a water supply.

*Sir W. Carey.*—There must be a plentiful supply of clean fresh water for the manufacture of paper or for pulp.

*President.*—You see the importance of this. It is very important in looking forward to the future of the paper industry in India to consider just how far a mill established at a long distance from the supply of fuel stands a chance.

*Sir W. Carey.*—As regards the supply of water in hilly country like parts of India it is possible in many places to have a catchment area and a dam.

*President.*—Do you mean for the development of hydro-electric power?

*Sir W. Carey.*—Even for the supply of water itself.

*President.*—As far as water is concerned, I have no doubt that the particular need can be met in a very large number of places all over India. I do

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\* Statement II.

† Statement III.

not feel any particular anxiety about it. But the question of fuel and power is to my mind one of the difficulties.

*Sir W. Carey.*—You can get away from that to some extent by two means. One is, of course, the choosing of a site suitable for creating a dam to provide you with hydro-electric power, and also suitable forests within reasonable reach, so that the fuel for your boiling and drying, whether of pulp or paper really becomes the only fuel essential. The manufacturing processes, except for these, can all be run hydro-electrically.

*President.*—Perhaps it would be easier if we revert to that point when we come to "power and fuel," but I wanted to mention it at the beginning, because it is very important to the future of the paper industry in India to what extent paper mills can be established at various points in the country.

In answer to Question 8 you have given the approximate percentage of your outturn for various kinds of paper. The Browns, Badamis and News come to 30 per cent. Would that classification include unbleached paper?

*Sir W. Carey.*—Yes.

*President.*—Then in answer to Question 10 you say "we are compelled to manufacture a large variety in order to meet competition offered by the importers, and owing to there being an insufficient number of mills in the country to admit of specialising in qualities and inter-dealing on the British system while as a whole catering for all kinds in demand." Is it not rather more than that? Is it not also this that there is an insufficient demand for any particular kind of paper in the country? Is the Indian market large enough at present to admit of specialisation?

*Mr. Bellamy.*—This demand certainly does exist, only we have got to take any order that is offered to us at present owing to the competition for business.

*Sir W. Carey.*—Of course, a mill might specialise by turning out three or four thousand tons of paper: it need not necessarily be a full 4 or 8-machine mill. A 4-machine mill would be advisable; a 2-machine mill could be put up, but it depends so much on local conditions.

*President.*—You think the market is large enough to admit of specialisation in some kinds in white printing for instance?

*Sir W. Carey.*—Yes. Last year there were 1,600 tons of white printing alone imported into India.

*President.*—So far as the size of the market is concerned, you think that specialisation, at any rate in one or two kinds of paper, is possible?

*Sir W. Carey.*—If we could secure the whole market for all classes of paper that can be made in India with Indian materials, it would be possible to specialise.

*President.*—Is that the only reason, or is there anything in the conditions in India which make specialisation difficult? The reason why I am asking you is that the answer we got to the same question from another mill, probably the Bengal Paper Mills, is that the Indian local agents were constantly called upon by their customers to supply any kind of paper, and they expected to be able to get from the paper mill with which they dealt any kind of paper.

*Mr. Ginwala.*—They said that in orders for a particular kind of paper the quantity was too small, and there were too many varieties asked for. That was the difficulty.

*Sir W. Carey.*—That is true in the market at present. Orders are compiled very often.

*Mr. Ginwala.*—There are two things: orders are said to be too small and there are too many varieties asked for.

*Sir W. Carey.*—What I think really the position is, that, if we could be assured of having a larger field to choose from, by having imported papers of all qualities put to a price at which we could compete for those qualities that

we can make, we should then be able to get larger orders for special lines which we should certainly take. It would eliminate, I think, a lot of smaller orders.

*Mr. Ginnala.*—Are all these varieties that are used in the bazar absolutely necessary?

*Sir H. Carey.*—I have always had a theory that they might be educated up to it, that is to say, the qualities which Indian mills could make on big runs might be made acceptable to the market in larger quantities; but at present it is not possible to do that, because of the keen foreign competition in all grades.

*President.*—I am afraid I do not quite understand how foreign competition prevents you from specialising. Is it this that, owing to foreign competition, in order to get a market at all, you have to take up orders which are too small to be dealt with by importers? Is that it?

*Sir H. Carey.*—No. We have people who would like to buy from the Indian mill, but with those orders of a decent size, in order to get the advantage perhaps of credit here and buying smaller lots than they would be able to get from abroad, they also give us a lot of small orders which we do not really want, but which we have to take in order to keep customers.

*President.* How are these requirements to be supplied? If you cease to supply, who is going to supply them in the future?

*Sir H. Carey.*—May I ask what exactly is the real point?

*President.*—You say that, once protection is given, you would be able to decline these smaller miscellaneous orders, and concentrate on the manufacture of particular kinds of paper. What I asked was who is going to supply these smaller orders in future? Where are the consumers of paper to go to have their needs supplied?

*Sir H. Carey.*—Some, I think, would be substituted by other lines, and others would be still supplied by the importer and other mills specialising in those particular classes of paper.

*President.*—Not "still supplied" because *ex hypothesi* the Indian mills are not going to supply any longer. I do not really see that this question is much affected by protection. If you could concentrate on the manufacture of two or three kinds of paper, I gather that it would reduce your costs, and therefore you would at once be in a position to compete with imported paper.

*Sir H. Carey.* We have always tried to do it and we found it impossible to do it because of the import competition.

*President.* It can only be impossible if you could not find a sufficient market for your output, after you had concentrated on one or two kinds. But so long as you can keep your mill fully employed, I don't see where the difficulty comes in.

*Sir H. Carey.*—I was going to say that, if it were on a level price, we could get larger lines.

*President.*—I don't follow, unless it means that you charge a higher price for these miscellaneous orders to make them remunerative. You might, for example, make only certain qualities of paper, *e.g.*, white printing and writing paper. If you could sell a sufficient quantity, even at a price lower than what you are getting at present for that kind of paper, you might reduce your costs by getting rid of these miscellaneous orders to such an extent that you would be better off than you are at present. But if there is a difficulty in finding a market for some reason—a difficulty, that is, in selling a sufficient quantity of the kinds in which you specialise, then, of course, I can understand it.

*Sir H. Carey.*—That is the difficulty at present, and if we went in for specialisation in two or three lines for the bazar, we should lose trade, at any rate for a time, and we have never been in a position to afford to do so.

*President.*—That is what I wanted to bring out. That is to say, people would not come to you for the kind of paper you are specialising in because they could not also get the other kinds.

*Sir W. Carey.*—That is so. We would have to educate a market, but we have never been in a position to afford to do it, because during the short period of prosperity that occurred during the war, it was just a question of making paper; the mills were forced to make what they could with the materials then available. There is another point with regard to the number of kinds that we have to make, and that is what the Government call for. They call for a large number of makes.

*President.*—Then again, if there were more mills, it would be easier to arrange.

*Sir W. Carey.*—Quite so.

*Mr. Ginnala.*—How many Directors have you altogether? I notice that there are three Indian Directors.

*Sir W. Carey.*—We have eight.

*Mr. Ginnala.*—But three is a small proportion, isn't it, as compared with the number of shareholders. How do they allow it? Have they more faith in European management, or is it pure want of interest,—what is it? I don't understand how, if there are 70 per cent. Indian shareholders, there are only three Indian Directors: there should be at least two more. I know it does happen that the Indian shareholder is very indifferent at times, is that the explanation in your opinion?

*Sir W. Carey.*—I think the Indian shareholders feel they have got three very good Directors.

*Mr. Ginnala.*—Who are they?

*Sir W. Carey.*—There has just been a vacancy: Mr. Birla has resigned and has been replaced by Mr. Harkissen Bhatler of Messrs. Sampchand Hukumchand; then there is Mr. Badridas Goenka and Mr. Naraindas Bajoria.

*Mr. Ginnala.*—Are they large shareholders?

*Sir W. Carey.*—I don't know.

*Mr. Ginnala.*—It does seem to me rather curious.

*Sir W. Carey.*—I think it is a very common position with regard to most industrial companies in the east of India with very large Indian shareholdings.

*Mr. Ginnala.*—It may be due to the fact that there are not so many Indians interested in business in the east as there are in the west of India. Then in answer to Question 4 you say "The last additions to machines have been made in the year 1905." Surely that does not apply to the whole machinery?

*Sir W. Carey.*—No, the papermaking machines only as distinct from the rest of the mill.

*Mr. Ginnala.*—Does not that make them rather out of date?

*Sir W. Carey.*—I don't think so. You will find many mills all over the world making first class paper with machines that have been running for 30 or 40 years.

*Mr. Ginnala.*—That does not mean that the machine is efficient. I may be able to make paper by hand: and you may require a machine. That is quite a different thing.

*Sir W. Carey.*—As a matter of fact we had more than one discussion—quite apart from the question of expenditure—as to the suitability of the machines for the Indian market—these particular machines—

*Mr. Ginnala.*—I may tell you that criticism has been made that the machinery in this country—not necessarily in the Titaghar mills—is extremely antiquated.

*Sir W. Carey.*—We have been advised on more than one occasion, and quite recently, that our machines are very suitable for the Indian market—that is, for making the class of paper demanded. We might put up larger machines running very fast and that sort of thing, but at present for making some of the classes of paper that we are asked to make we cannot run our machines at full speed.

*Mr. Ginnala.*—Surely you can regulate your machinery to any speed. It is not necessary to have old fashioned machines for that purpose.

*Sir W. Carey.*—I am afraid I cannot admit that our paper-making machinery is old-fashioned. Of course, the statement that the last additions were made in 1905 does not include the tremendous number of additions and alterations and improvements made from time to time since then.

*Mr. Ginnala.*—Then in your answer to Question 6, the output for 1922 appears to be rather small as compared with the previous years.

*Sir W. Carey.*—That was the time of renovation of the mills.

*Mr. Ginnala.*—Have you completed the renovations?

*Sir W. Carey.*—Practically complete—on present scheme.

*President.*—Are these outputs that you have given for both the mills together?

*Sir W. Carey.*—Yes.

*Mr. Ginnala.*—Do you agree with the opinion expressed by some experts that the pulp mill must be near the raw materials in any case, and that you may manufacture paper there if conditions are favourable, or elsewhere where conditions are more favourable? Now with regard to the first point, do you agree that the pulp mill should be in the vicinity of the fibre?

*Sir W. Carey.*—I think, if you have other suitable conditions at the same time, that is to say, water and local fuel—

*Mr. Ginnala.*—Let us put it this way. Where does the industry stand a better chance of success—near or in the vicinity of the fibre in pulp manufacture or away from it?

*Sir W. Carey.*—It should be in a central position with reference to the fibre, not necessarily actually near it.

*President.*—It might be central with your fibre coming from 1,000 miles round.

*Mr. Ginnala.*—The point is the cost of transport of the fibre. It must be so situated that the cost of transport of the fibre to the pulp mill should not be uncommercial.

*Sir W. Carey.*—Exactly, it should be as low as possible.

*Mr. Ginnala.*—Therefore it follows that it must be within reasonable distance of the fibre?

*Sir W. Carey.*—Yes.

*Mr. Ginnala.*—That you agree is one of the conditions?

*Sir W. Carey.*—Yes. Still, I am afraid I must hold to my central position.

*President.*—So long as the fibre has not to be brought from a great distance, the central position does not seem important.

*Sir W. Carey.*—It all depends upon the extent of your supplies at that one point, if it is enough to supply the whole of your mill.

*President.*—Your point is that if you are drawing your supplies from all sides, it is more likely that you will not have to draw them from great distances.

*Sir W. Carey.*—Yes.

*Mr. Ginnala.*—The manufacturer in Great Britain gets his fibre from very long distances and somehow manages to undersell you. But take the other countries like Sweden, Norway and Canada, where, you know, the pulp mills



are not very far from the fibre; that is what I meant. I don't mean a site like yours, which you call central because it is 900 miles from some of your sources of supply.

*Sir W. Carey.*—We have expanded our resources of raw material, that is to say, we have gone out as far as we can economically do so to develop our raw materials from the central site of the mill.

*Mr. Ginwala.*—As a matter of principle, I think it must be admitted that except in Great Britain this principle generally holds good.

*Sir W. Carey.*—Yes. Of course in Sweden. I have not been to Sweden since 1914, but even then some of the mills were drawing their pulp wood from even 600 or 700 miles.

*Mr. Ginwala.*—But it comes down what they call the fjords.

*Sir W. Carey.*—Yes, they have very easy means of transport. But I quite agree that it is good to have the mill as near its fibre as possible.

*Mr. Ginwala.*—With regard to grass as a fibre it does not lend itself very much to the application of that principle, does it?

*Sir W. Carey.*—I don't think grass has been up to the present nearly enough prospected.

*Mr. Ginwala.*—I am not talking of what might have taken place; I am talking of the present conditions. What I want to know is, so far as the exploitation of grass as a fibre goes in this country at present, the application of this principle is difficult, isn't it?

*Sir W. Carey.*—I would not go so far as that.

*Mr. Ginwala.*—How far would you go? Can you put up a pulp mill in the Nepalmunge forests, for instance?

*Sir W. Carey.*—Not in the Nepal forests.

*Mr. Ginwala.*—Can you do it in other forests?

*Sir W. Carey.*—It is possible in the forests in the United Provinces.

*Mr. Ginwala.*—Can you get the whole of your fibre from one field?

*Sir W. Carey.*—Yes.

*Mr. Ginwala.*—How much would it be?

*Sir W. Carey.*—25,000 tons of grass.

*Mr. Ginwala.*—But then you have got an 18,000 tons unit?

*Sir W. Carey.*—I take it that, if you are considering the possibility of putting down a new mill, you put down what is a commercial unit; it may be 5,000 tons or it may be 10,000 tons a year. 10,000 tons would certainly be a commercial unit.

*Mr. Ginwala.*—In some cases it may be possible?

*Sir W. Carey.*—Yes. Speaking of grass, we have of course only prospected tentatively because we have not had funds, but from the figures we have we gather that it should be possible to put down a mill in the United Provinces. There are other districts, I am sure, where, if properly prospected for *sabai*, an equal chance would be found for putting down a mill.

*Mr. Ginwala.* Now let us take bamboo. Bamboo lends itself more easily to that?

*Sir W. Carey.*—It is heavier and occupies a smaller space.

*Mr. Ginwala.*—Its growth has now been found to be more regular?

*Sir W. Carey.*—I don't think there is any doubt whatever that an every five years cutting is quite possible as the growth renews itself during that period.

*Mr. Ginwala.* So that you are quite secure of supplies?

*Sir W. Carey.*—Yes.

*Mr. Ginwala.*—Therefore what I want to know is—I am only speaking generally and not talking of any particular mill—is not bamboo more reliable as a means of developing the industry as a whole?

*Sir W. Carey.*—Bamboo is a thing which must be distinctly looked upon as a fibre for the future. We have always thought so.

*Mr. Ginwala.*—In the case of bamboo what would you recommend? Would you have the manufacture of pulp along with paper or would you have the manufacture of pulp near the fibre and then transport it to the paper mill?

*Sir W. Carey.*—It depends very much on what we are making the pulp for.

*Mr. Ginwala.*—I am taking it that you are manufacturing paper. Let us take that first. In your own scheme what did you have?

*Sir W. Carey.*—We had the idea of making pulp for our own consumption and the consumption of other Indian mills. We were going to manufacture 10,000 tons of pulp which we should use in addition to *salai* and in replacement of the imported pulp.

*Mr. Ginwala.*—In the Titaghur mills or where?

*Sir W. Carey.*—In our own mills in Burma, and we were going to do it for others when we had succeeded.

*Mr. Ginwala.*—It comes to this: where you manufacture your pulp for export, it will be preferable to manufacture pulp near the fibre, and to manufacture it into paper where the conditions are favourable.

*Sir W. Carey.*—At the same time it is necessary that you should be on a waterway so that you can float your bamboo rather than get it by railway transport. Preferably you should have water communication with a port, if possible, for export purposes. There have been several sites which have been pointed out to us.

*Mr. Ginwala.*—How much water do you want per ton of pulp or paper? You get your water from the Hooghly, I think?

*Sir W. Carey.*—We are using at Titaghur for an output of 15/1600 tons a month 2 million gallons daily of pure water. That is for all purposes.

*Mr. Ginwala.*—When you say pure water you don't mean free from bacteria, but only free from mechanical impurities?

*Sir W. Carey.*—Yes.

*Mr. Ginwala.*—As regards your answer to Question 10: is it necessary for the Indian consumer to have so many varieties of paper?

*Sir W. Carey.*—I wish he could think it was not.

*Mr. Ginwala.*—Is there any variety that he asks you to give that is indispensable for use? Of course he should have white printing paper. But is it necessary that he should have so many varieties? I am thinking of ordinary paper.

*Sir W. Carey.*—I should think not.

*Mr. Ginwala.*—The point is: does he really want it?

*Sir W. Carey.*—He wants the different qualities on account of the differences in prices.

*Mr. Ginwala.*—Let alone the price.

*Sir W. Carey.*—The bazar, of course, has been very well treated.

*Mr. Ginwala.*—There are two different kinds of paper, blue, red, etc. He need not have the red if he can do with the blue.

*Sir W. Carey.*—They have been given the paper that they have asked for. They have been able to get them so far. I take it that so long as they are able to get them, they will ask for them.

*Mr. Ginwala.*—Supposing there are 50 varieties you can manufacture and he wants them all because he can get them; there may be 25 varieties which he can do without. He simply asks for them because he thinks that you would let him have them.

*Sir W. Carey.*—I think that you are trying to get to the point of helping the mills to make a smaller number of kinds—both present and future mills.

*Mr. Ginwala.*—The only thing is that it should not involve any hardship to the consumer if he is confined to the use of a smaller number of varieties.

*Sir W. Carey.*—I have always held the view that it is possible to reduce the number of varieties. In reducing some you may drive the consumer to imported papers. He would still use something similar to what he used to have before. That is our difficulty. We find that, if we don't take a lot of these little orders, we do lose business. It goes to importing firms.

*Mr. Ginwala.*—Supposing the Board find that it is really a waste of national resources for the consumer to have these fads, and they say "All right, we shall devise some means by which he cannot substitute any imported paper"?

*Sir W. Carey.*—In that case I quite agree. That is the point which I was trying to make before the President. It is then possible I am sure to use a smaller number of grades.

*Mr. Ginwala.*—Is it possible?

*Sir W. Carey.*—My view is that, if the difference in prices between the different qualities of paper is levelled up, then the bazar will take a better quality of paper to some extent.

*President.*—Do you mean that the inferior kinds of paper should be made more expensive? I don't quite follow.

*Sir W. Carey.*—No. I did not put it properly.

*Mr. Ginwala.*—That was no answer to my question. Take the case of the Ford car. You go to the Ford people and ask for a 10 horse-power car. They say 'no.' You go to the Wolsley people. They would give you a 10 horse-power car, or a 15 horse-power car and possibly other horse-powers. But the consumer soon begins to realise that a 10 horse-power car is not any the cheaper. I want to know whether that sort of thing is possible in your paper business.

*Sir W. Carey.*—I should say it is.

*President.*—Would it not be essential that such replacement of paper as is going to take the place of different varieties should be cheaper? That is the only practical method by which you can get at the consumer.

*Sir W. Carey.*—That is what the mills are working to do to reduce us far as possible the cost of their better grades of paper. That is what we are trying to do all the time. We have been successful to some extent already. Nobody would be better pleased than the mills to be able to reduce the price of decent qualities of paper.

*President.*—After all, what Mr. Ginwala is aiming at is to find some means by which the Indian consumer will be content with a much smaller number of varieties of paper. What I am suggesting to you is that the only way by which that can be done is to make the kind of paper produced by the mills relatively cheap. Whether it is a good kind of paper or a bad kind of paper is not Mr. Ginwala's point. It has that which has led to the success of the Ford car—through standardization, mass production and consequently a very low price.

*Mr. Ginwala.*—They refuse to give anything but the standard type.

*President.*—If you can think of any other way of attaining Mr. Ginwala's object, by all means tell us. Of course, it might conceivably be done by imposing import duties of such a kind as to make these varieties of paper relatively expensive. You get the same result in the end.

*Sir W. Carey.*—In the actual matter of practical politics, I cannot do better than repeat what I said earlier, that the mills have always had the idea of reducing the numbers of their makes, but that they have been unable to do so.

*Mr. Ginwala.*—How can the mills be enabled to do so?

*Sir W. Carey.*—I should like to think it over.

*Mr. Ginwala.*—Apart from the question of quantities, what is the difficulty in making the different varieties? Is it a question of weight, is it a

question of fibre that you have got to use in different varieties or what is it? What makes it so expensive to have so many varieties?

*Sir W. Carey.*—Continual changes, stoppage of machines, altering weights, etc.

*Mr. Ginnala.*—That is, you have got to use different rollers?

*Sir W. Carey.*—You have got to stop your machine, let go certain fibres, alter your speeds and so forth.

*Mr. Ginnala.*—It makes the mechanical process more difficult?

*Sir W. Carey.*—Yes.

*Mr. Ginnala.*—The chemical process is not affected?

*Sir W. Carey.*—No, it is only a question of losing time and pulp.

*Mr. Kale.*—You speak of importing superior officers who are in touch with the newest methods employed in Europe and America. When these men are appointed, are their appointments only for short periods?

*Sir W. Carey.*—Generally for a term of years.

*Mr. Kale.*—How many years?

*Sir W. Carey.*—3 to 4.

*Mr. Kale.*—Are they generally continued afterwards?

*Sir W. Carey.*—Of late that has not been the case. We have more or less short term arrangements.

*Mr. Kale.*—If you want to get the full advantage of these experts from Europe and America, you cannot have these men here for long periods. If they remain in India, they will be out of touch?

*Sir W. Carey.*—They go home to keep themselves in touch.

*Mr. Kale.*—Do you give them facilities for this so that they might go to the works and study new processes?

*Sir W. Carey.*—Yes. When they get their leave they generally spend their time in study.

*Mr. Kale.*—You don't do anything?

*Sir W. Carey.*—We do to some extent. We get them introductions.

*Mr. Kale.*—Do you think that the processes of paper manufacture are to be distinguished from other manufactures so far as experience and training are concerned; that is to say, does the paper manufacture require more intense experience and training than any other industry?

*Sir W. Carey.*—It requires very practical training.

*Mr. Kale.*—Every other industry requires it. You say "This industry is one which requires a man to be trained from a very early age in a practical manner in the mill." Does it not apply to other industries also?

*Sir W. Carey.*—Very likely to many, I quite agree.

*Mr. Kale.*—This is not a speciality of paper manufacture?

*Sir W. Carey.*—No, but it is essential to this trade.

*Mr. Kale.*—That is to say, a man cannot pick up this industry or some of the operations in it in two or three years?

*Sir W. Carey.*—No, he cannot.

*Mr. Kale.*—That would practically mean the creation of a caste of paper manufacturers?

*Sir W. Carey.*—It comes to that in England and in America.

*Mr. Kale.*—That is so in all countries in all industries, but I thought that, with modern methods of technical education, it had become now possible for a young man to pick up this industry in three or four years.

*Sir W. Carey.*—A man can get a lot of technical training; a man can get a lot of technical knowledge; but he must have the practical training in paper manufacture, more so than perhaps in some others. I don't say in all but in some.

*Mr. Kale.*—In answer to Question 9 (b) you refer to certain hand-made writing papers. The so-called hand-made writing papers appear to be manufactured by machinery. That seems to be rather inconsistent. What, are these 'hand-made' writing papers made by machinery?

*Sir W. Carey.*—I think that there are actually mills specialising in making stuff by hand. Also to some extent it is a trade name.

*Mr. Kale.*—To what extent have you been able to supplant the hand-made paper in India which is used for ledgers and other purposes? Indian merchants—Marwaris and others—use for their ledgers hand-made paper. Have you been able to replace that?

*Sir W. Carey.*—I don't think that it is really hand-made paper that they use.

*Mr. Kale.*—Some of these are actually hand-made. They buy at Dewali and the Dasra at the beginning of the year.

*Sir W. Carey.*—We don't do that.

*Mr. Kale.*—You have postponed giving an answer to what Mr. Ginwala was asking you. I don't want to press that question just now. I want simply that you should consider one point before you give your answer, so that I may not have further to ask you later on. He was asking you whether it would not be possible to confine or restrict the Indian consumer to particular varieties. But don't you think that this will be practically imposing your own will upon the consumer? The manufacturer can do it only by making his wares more attractive either in price or in quality. Government cannot come down on the consumer and say "you shall buy this and you shall use this paper." That would be the old type of sumptuary laws. So the only way in which the manufacturer can make the consumer use a particular type of article will be to make it attractive by improving the quality or lowering the price. To my mind these are the only two ways of doing it, unless the Government were to make a law that from to-morrow all consumers in India are to use only two or three varieties of paper. That is the position as I understand it.

## II. RAW MATERIALS.

### A.—Primary.

*President.*—In answer to Question 16, you say "There are however some 11/12 lakhs maunds in our fields, provided it paid to work out the additional quantity, which at present it does not." I am not quite sure that I understand that.

*Sir W. Carey.*—Our present consumption of grass is from 8 to 9 lakhs of maunds. If we worked our mills to their full capacity, we could go further afield and get another two or three lakhs of maunds, provided railway freights came down, or labour charges went back to pre-war level.

*President.*—Does the answer mean that it does not pay you at present to work more distant fields?

*Sir W. Carey.*—It does not pay us to go into the more distant fields.

*President.*—If, however, the railway freight were lower, you could afford to go in for it. It really depends on the railway freight?

*Sir W. Carey.*—Yes. But I may say that we had to go as far as Nepal to supply ourselves. We have gradually extended out as the consumption of grass increased.

*President.*—You say lower down in the same answer "The importation of wood pulp is dependent upon the cost of collection and conversion of other raw materials in proportion to the varying prices of the pulp offered from Europe." I take it that, if wood pulp happens to be cheap, you use more wood pulp in the manufacture of paper. On the other hand, if it happens to be expensive, you have got to rely more on grass.

*Sir W. Carey.*—That is so.

*President.*—So that it is one of the factors affecting your consumption of wood pulp?

*Sir W. Carey.*—Yes.

*President.*—Then you say "As regards rags and waste paper, the limit on the eastern side of India has been reached, both as regards quantities of supply and the cost." That is to say, supposing new mills were erected, they would be competing with you for the available supply?

*Sir W. Carey.*—I understand that the other mills do not agree with us. It is merely a statement of opinion.

*President.*—If your opinion is correct, that would be the result, would it not?

*Sir W. Carey.*—That is to say, the erection of other mills in Bengal might be hampered by that, but not to any great extent, because the actual consumption of it for paper is not essential. We should stop it to-morrow if it did not pay. Rags and waste paper have deteriorated.

*President.*—For what kind of paper do you use rags and waste paper?

*Sir W. Carey.*—Rags are used in the making of blotting paper and waste paper in many cheap papers.

*President.*—If all the supplies are already taken up, it means that there is a difficulty.

*Sir W. Carey.*—Yes, on the eastern side of India. As I said, there is a difference of opinion.

*President.*—In the figures that you have given in answer to Question 19, you have got one lakh "salami." I am not quite sure which Circle that relates to.

*Sir W. Carey.*—The Western Circle.

*President.*—The first two entries relate to the Western Circle?

*Sir W. Carey.*—Yes.

*President.*—I am not sure what this payment is?

*Sir W. Carey.*—This figure is the payment for the year.

*President.*—I always understood "salami" in the sense of a lump sum payment and I have never heard it used in this way for a recurring payment. How does it differ from royalty?

*Sir W. Carey.*—It was an arrangement made for transfer of a lease to the mills which did not previously belong to us.

*President.*—All I want to find out is what it means.

*Sir W. Carey.*—Rent, if you like.

*President.*—I take it that the Eastern Circle includes Sahebgunge?

*Sir W. Carey.*—The Eastern Circle is in the United Provinces.

*President.*—I asked you because there was no entry as to the amount paid.

*Sir W. Carey.*—They are paid by the contractor. We are working that whole area by a contractor.

*President.*—In answer to Question 20, you say that in 1913-14 you purchased your total requirements from sundry contractors at Rs. 1-12 a cwt. delivered mills. Is that Rs. 35 a ton?

*Sir W. Carey.*—Yes.

*President.*—These figures in Question 20 are a bit confusing. What we want to get at is the total cost delivered at the mill for the two years and for each area separately.

*Sir W. Carey.*—Each area separately, you will have it.

*President.*—I am not sure how many items we are to total. You have given us details but you have not added the total. Also you have given us the average freight from the field to the despatching station and the average from the despatching station to the mill. That must vary from circle to circle.

*Sir W. Carey.*—The average over-all are these three figures added together for the last season's working, not the current year. It is Rs. 80 per ton.

*Mr. Ginwala.*—What about the average royalty?

*Sir W. Carey.*—That is all included.

*President.*—But in one case you have given the royalty at Rs. 63 per ton.

*Sir W. Carey.*—But that particular figure is for very short working, only a quarter of full working.

*Mr. Ginwala.*—You have given these three fields. How much do you get from each field and what is the freight from each?

*Sir W. Carey.*—At present from the Western Circle the freight is about 9 annas per maund. It comes from different despatching stations, but it comes to about 9 annas per maund.

*Mr. Ginwala.*—What is really required is: you have got (a), (b), (c) and (d) average. What I want is the same thing for each area and the total. You have given the average for all the areas; what is required is the same information for each area. Of course, you have given the quantities.

*Sir W. Carey.*—We have the figures but not with us. We will have them sent to you.

*President.*—Your total cost is Rs. 60. Does that include royalty?

*Sir W. Carey.*—The average royalty of Rs. 19 is included in this figure. Rs. 60 is the actual cost for last year—1922-23—and it is the average for all the three fields together. In both Nepal and Western Circle, in one case it was quarter of the full working of the field and in the other half the full working owing to renovations all the time at the mills. The total quantities we expect to get would be 30,000 tons of which, say, 8,000 will be from Sahabgunge, and from the other two fields an equal quantity more or less of the balance.

*Mr. Ginwala.*—It would be better if you would send us corrected figures.

*President.*—You say in answer to Question 21 that it would assist you if the Forest Department could give a longer time. The reason why they have imposed this restriction is not given.

*Sir W. Carey.*—I think it is simply a forest rule.

*President.*—But there must be some reason for it.

*Sir W. Carey.*—We are simply told that our cutting must be stopped on a certain day.

*President.*—It might be that if you had a number of coolies in the forests during the dry season of the year, there would be a danger of fire. That is what I imagine is probably underlying it. I cannot imagine any other reason. Assuming that the Forest Department have good reasons for their rule, it amounts to this that it is one of the disadvantages that you have to meet in making paper from grass.

*Sir W. Carey.*—Yes.

*President.*—Then again you say later on "if the practice of annual burning of grass clumps could be permitted it would undoubtedly help to improve yield and keep down weeds among the grass." The reason why the forest people object to that must be an apprehension of damage to the forest from fire. Do you know of any other reason?

*Sir W. Carey.*—Probably the reason is as you suggest.

*President.*—In the first sentence of the answer to Question 22 you say "Taken as a whole, when care and attention is given to the grass fields, there should be no marked deterioration." But has there been deterioration in the past? All you say is that there should be no marked deterioration.

*Sir W. Carey.*—In our own fields I should say "No."

*President.*—I rather gathered that there had been, because you could not give them proper care and attention.

*Sir W. Carey.*—All it means is that we can do better if we were allowed to burn. If we were not allowed to burn we can still do well.

*President.*—What is running in my mind is that it is a very guarded answer that you have given. You obviously refrained from committing yourself as to what actually had happened, and confined yourself to what ought to happen.

*Sir W. Carey.*—There was difficulty at times with regard to what was one of our chief fields at Sahchgunge. With regard to this we approached the Bihar and Orissa Government with the contractors and we got that lease. Now they are taking the necessary care of the fields. It is the same thing as any other agricultural produce and it has got to be taken care of. I think this is really the answer to your question.

*President.*—The question is "Have you found the supply of raw material constant in respect of quality or have you noticed or do you expect any deterioration?"

*Sir W. Carey.*—That was the only occasion when we noticed it.

*President.*—In answer to Question 23 you say "The mills are now drawing *sabai* grass from larger areas than before the war owing to the following reasons:—

- (a) The increase which took place during the war, and which has still been maintained to some extent since, in the price of imported pulp;
- (b) The consequent competition among the mills for the supply of *sabai* and other materials.

Have you in the last two years been using less wood pulp and more *sabai* grass than you were before the war?

*Sir W. Carey.*—In proportion to what the mills have done, we are.

*President.*—Would it be possible to give your figures for one year before the war, say 1913-14, and also for 1922-23?

*Sir W. Carey.*—

1914, we used 17,283 tons grass.

1923-24, we used 21,400 tons grass.

1914, we used 6,952 tons of wood pulp.

1923-24, we used 5,964 tons of wood pulp.

Rags and waste paper we used 2,000 tons less in 1923-24 than in 1914. As a matter of fact our consumption of wood pulp is going down again.

*President.*—I do not take this answer as referring to what actually is going on at the present moment, but to what actually went on in the past.

*Sir W. Carey.*—Yes.

*President.*—Can you give the pre-war price of wood pulp?

*Sir W. Carey.*—Rs. 160 a ton delivered at the mills at Calcutta.

*President.*—I take it it is sulphite pulp?

*Sir W. Carey.*—Easy bleaching sulphite pulp.

*President.*—Can you give the present price to compare with this figure of Rs. 160?

*Sir W. Carey.*—Rs. 240 under the last invoice.

*President.*—At what rate of exchange?

*Sir W. Carey.*—We may remit it at 1s. 4d. or over.

*President.*—In the same answer referring to the Western Circle areas you say "that these have proved expensive holding up to date, but with full working this next year, we hope to get grass at economic rates. These areas will not be worked at their cheapest until a pulp mill is erected near the grass fields . . ." Have you actually worked out the figures for this contemplated mill?



*Sir W. Carey.*—Only as an experiment. This is simply a report on a scheme.

*President.*—As regards the cost of manufacture, on the one hand, you are going to get your raw materials much cheaper, but on the other hand your coal will be more expensive.

*Sir W. Carey.*—We reckoned the coal for the purpose of this calculation at something like Rs. 20 a ton at the site, allowing for Rs. 10 to Rs. 12 railway freight.

*President.*—How does that compare with the cost of a ton of coal at Titaghur?

*Sir W. Carey.*—It is more than double.

*President.*—At 5½ tons of coal per ton of paper it means a difference of Rs. 55?

*Sir W. Carey.*—That is only pulp. We should be making unbleached pulp and should be using coal solely for boiling and drying. The mill will be run by water power. That was the scheme.

*President.*—In that case, of course, the cost of coal will not be so predominant a factor.

*Sir W. Carey.*—It would be 2 to 2½ tons to a ton of pulp.

*Mr. Ginwala.*—In addition to the electric power?

*Sir W. Carey.*—Yes.

*President.*—It seems to me a very high figure.

*Sir W. Carey.*—We may leave it at 2.

*President.*—If it is correct, it does not brighten the prospect of making paper from bamboo pulp in various parts of India.

*Sir W. Carey.*—I do not think it is such a very great cost. Here also we have considered the question of local fuel. If you are near your forests naturally it is a question of cost on each side.

*President.*—You may find that you have got to bring wood for fuel from greater and greater distances, as you burn up the wood that is near the mill.

*Sir W. Carey.*—Firewood replaces itself fairly easily. For instance, in places like West Coast or Mysore you would not probably consume coal: you would probably consume local fuel.

*Mr. Ginwala.*—In Burma also to some extent.

*Sir W. Carey.*—To some extent where the price of coal is probably high.

*President.*—You say at the foot of page 6 (Question 23) "that if bamboo, or other primary raw material, came to be developed, the expansion of the trade would be able to go on, and would only be again limited by markets." May I take it that means that, on the basis of grass only, no great expansion of the paper industry is possible, and that the prospect of any expansion is dependent on other kinds of primary raw materials?

*Sir W. Carey.*—I think we have dealt with that to some extent in answer to Question 16. Undoubtedly further supplies of *sabai* would be found. I will put it in this way. For a big expansion *sabai* would not be sufficient, but I do not think that *sabai* should be left out of account even then, because in any case very good paper can be made, as is done in Europe, with a mixture of imported pulp, or other pulp, and Esparto. In any case where it is available it is an auxiliary fibre to help others, but for any great expansion I cannot quite agree. You should look for other raw materials, although the *sabai* fields are not yet fully developed.

*President.*—50 per cent. of your output is white printing paper. What is the imported white printing paper that comes into the country chiefly made of?

*Sir W. Carey.*—Sulphite wood pulp.

*President.*—Does not that fact in itself rather suggest that, in the long run, grass cannot hold its own against wood? Of course, wood pulp is becoming more expensive but that is another matter. Is it not a relevant fact that wood pulp has ousted grass for paper manufacture in Europe?

*Sir W. Carey.*—There are still grass mills working, and it is the grass mills that are continuing to pay.

*President.* It is used as a constituent of certain kinds of paper, is it not, along with other materials, and also for the manufacture of particular kinds of paper for some special reason?

*Sir W. Carey.*—I may say that in India also *sabai* grass paper has certain preference over other grades.

*President.*—I am quite prepared to believe that is true of certain kinds of paper, but take the case of white printing paper.

*Sir W. Carey.* *Sabai* paper is preferred. Grass papers always have got a special value of their own because of bulking. Also, of course, they have their very great value in the life of the paper.

*President.*—The paper made of grass may be better. But when the question of price comes in, it may be found that wood pulp is good enough and is decidedly cheaper. I take it that it is for that reason its use has become universal in the West. What I am putting to you is really this. If paper made from grass in India can eventually hold its own against paper made from wood pulp, then it must be for some special reason. Why is it possible in India when it has not been found possible in Europe? That point has been in my mind for some time. Grass may be always used in India for certain kinds of paper and may hold its own to a limited extent, but can it maintain its position as the principal paper making material?

*Sir W. Carey.*—I quite agree. We look forward to expansion.

*President.*—But it is more than that. It may be driven out altogether, assuming that protection is not given.

*Sir W. Carey.*—I think if there appeared to be any probability of that danger we would adapt our plant to use bamboo.

*President.*—I am not alluding to the question of bamboo at present. You have suggested yourself that it is advisable that protection should be given not only to paper but also to pulp, the reason being that people might start paper mills and use mainly imported pulp. If that is a possibility, to that extent grass cannot hold its own.

*Sir W. Carey.* We recognise we have got to go down cheaper, and we see our way to do it gradually by improving our methods and by still further improving our plant. I have a figure here for the month of June 1924. Our total cost of grass pulp only is Rs. 241 per ton for the month against Rs. 240 of imported wood pulp.

*President.*—In the statement you gave us I don't think there is any overhead in that. However we will come to that later on. In answer to Question 28 you say "we hold the opinion that grass paper is in some respects more suited to the present Indian market." I would like to know what was in your mind in giving that answer?

*Sir W. Carey.*—As I was saying, it is favoured by many buyers because of its bulk and its feel. They prefer grass paper as compared with wood pulp paper.

*President.*—Who are you thinking of?

*Sir W. Carey.*—The bazar people. In other words they are prepared sometimes to pay more for it than for wood pulp paper.

*President.*—What is the reason?

*Sir W. Carey.*—It is the quality of the paper and its bulk. It is better, lasting paper, but I think they very often prefer it because the dealer gets more bulk per ream and sells it accordingly.

*President.*—Are there any other points?

*Sir W. Carey.*—The chief thing is bulk and strength.

*President.*—In answer to Question 30 (c) you say "Accessibility depends almost entirely on the situation of the bamboo forests with reference to transport, especially by water. Unless mills can be placed in close proximity to bamboo forests the bulkiness of the raw material makes transport a very great consideration. Areas have, however, been prospected, from which it would seem possible to draw supplies in sufficient quantity to justify the erection of plant." What areas have you in mind in giving that answer?

*Sir W. Carey.*—Our own firm's experience is chiefly confined to one area in Burma (produces a map and shows the position of forests).

*President.*—Is that the one which you finally thought would be the best?

*Sir W. Carey.*—That is the one we were going to work.

*President.* Can you tell us the conditions?

*Sir W. Carey.*—We have floating facilities from the forest to the site, that is to say, a river of sufficiently large size to take down the large quantities of bamboos that we require; proximity to a port where we should get such quantities of coal as are necessary at a fairly reasonable price. We also have facilities for fuel, I mean firewood: we are also at a place where we can get imported labour. These are some of the main considerations.

*President.*—Where would your pulp mill have been erected had you gone on with the scheme?

*Sir W. Carey.*—On the banks of the Pegu river above the Rangoon port.

*President.*—Would you have manufactured pulp there?

*Sir W. Carey.*—Yes.

*President.*—Did you intend to utilize the greater portion of it in your own mills?

*Sir W. Carey.*—At that particular time we had no intention of doing anything more than bringing it to India for our own consumption and turning it into paper, and we could then sell it in competition with imported pulp.

*President.*—But not at present?

*Sir W. Carey.*—It works out more or less at very much the same price to-day as imported pulp.

*Mr. Ginwala.*—That is to say, under present conditions?

*Sir W. Carey.*—Yes.

*Mr. Ginwala.*—And with your little or no experience of the business, I mean of bamboo?

*Sir W. Carey.*—We have our records and we have a certain number of men who are still in touch with us who have made experiments and enquiries. We have enough data to go upon, and we reckon that we should be able to make pulp and sell at somewhere about to-day's imported price, provided we could float a company to do that, that is provided the industrial market showed sufficient interest either from protection or by the natural profit obtainable on the rising price of imported pulp to make it worth while.

*President.*—Have you got any calculations which you could place at the disposal of the Board. It is a matter of great importance.

*Sir W. Carey.*—Of course, as I say, they are but calculations, but still they are based upon the experience which we have in some of our records of our people who have made experiments and enquiries.

*Mr. Ginwala.*—For what years are these?

*Sir W. Carey.*—Practically in the past few months.

*President.*—Can you let us have it in the form of a note?

*Sir W. Carey.*—Yes.\*

*President.*—The only other item I want to know about is the capital expenditure involved in establishing the works.

*Sir W. Carey.*—I don't suppose you can put up a mill under something like Rs. 45 to Rs. 55 lakhs. It depends on what your process is or the size of your mill.

*Mr. Ginwala.*—Say 10,000 tons.

*Sir W. Carey.*—Yes.

*President.*—You have got to get a return on that?

*Sir W. Carey.*—We are calculating 10 per cent. dividend on a certain basis of capitalization.

*Mr. Ginwala.*—Does that include the chemical plant?

*Sir W. Carey.*—There again is the question of your process. We were, of course, proposing to work on the soda process, with imported soda.

*Mr. Ginwala.*—The India Paper Pulp people are not working on that. They have not told us what it really is; they called it sulphite. Are you going to work the sulphite process?

*Sir W. Carey.*—No, we are believers in the soda process.

*President.*—Is there anybody else who is actually manufacturing it on a commercial scale? You have made experiments?

*Sir W. Carey.*—More than that: we have made many hundreds of tons of paper out of bamboo pulp by the soda process, before we started to talk about our mill at all. We had the same thing done by people in Scotland who had a considerable number of tons of bamboo in different forms and different qualities and had them manufactured by the sulphite and the soda processes, mostly by the soda process. I saw this particular process working in Edinburgh. Of course there is the usual difference of opinion in a technical matter of this kind—one man favours one process and another the other—but I don't think there is very great difficulty in working either on the best advice possible.

*President.*—But there is the question of cost?

*Sir W. Carey.*—The cost would be very much the same. Your cost would be affected by the type of the plant you put up, but I should say that the soda plant would be cheaper.

*President.*—As to the difference in the process, I think we are interested in it. Quite clearly both must be tried.

*Sir W. Carey.*—I think you might say that both have been brought to a practical point.

*Mr. Ginwala.*—Did Mr. Raitt change his opinion about the soda process?

*Sir W. Carey.*—I don't know.

*President.*—If you are to develop an export trade in bamboo pulp you must be able to get your price to something lower than the price at which the imported pulp comes in.

*Sir W. Carey.*—I think our calculations are based on that; I think they are pretty safe calculations.

*President.*—Then in answer to Question 31 you say "Several other grasses have been tested and examined over the past 20 years in comparison with *sabai*. None of them, however, gave a sufficient yield to make them attractive . . ." I take it this implies that paper made from these grasses would be more expensive than paper made from *sabai*?

*Sir W. Carey.*—May I say less attractive in comparison to *sabai*.

*President.*—It depends on what kind of paper you are making.

*Sir W. Carey.*—I would not at the same time go so far as to say that you could not put down a mill in the centre of some of the river grasses where you could manufacture pulp at an equally low cost in spite of the low yield. If you put your mill on the spot where the grass is in such tremendous profusion, you might be able to manufacture pulp to be shipped to local mills.

*President.*—Where are these river grasses to be found?

*Sir W. Carey.*—Considerable quantities on the Brahmaputra and even nearer to Calcutta, and, of course, they renew themselves every year so that they will never be out of supply. The possibilities of this grass had been discussed, and but for the failure of interest in the industry since 1918, a mill would have been erected by another firm to work this particular grass into pulp, and we should have had some practical experience. Many of these grasses yield as much as 22 or 23 per cent. which might make it quite a feasible proposition under these conditions.

*Mr. Ginnala.*—That is a very low yield.

*Sir W. Carey.*—Yes.

*President.*—In answer to Question 34 you say "We import no other primary raw materials but wood pulp, and this is chiefly for production of special kinds of paper . . ." Which are the kinds of paper for which it comes in?

*Mr. Bellamy.*—Croam laids and Banks.

*President.*—That is only a small proportion of your output? The other part of your statement suggests that it is very largely a question of the relative cost of wood pulp and grass pulp, also the wood pulp might be useful as a stand by in case anything went wrong with your pulp plant.

*Sir W. Carey.*—That has been so during the war on more than one occasion. But I think we are sufficiently assured of our grass and I think we will get it at a figure. . .

*President.*—I was not thinking of grass as a reserve. What I suggest is that there might be a break down in your machinery for making pulp.

*Sir W. Carey.*—I think that is very unlikely.

*President.*—It was given to us by another firm as a reason for importing wood pulp, and I am only putting it to you.

*Sir W. Carey.*—That might be a matter for consideration.

*President.*—Am I to understand that it is only for these two kinds of paper that wood pulp is necessary?

*Sir W. Carey.*—Wood pulp is of great importance; even if we could get bamboo pulp we should still use it.

*President.*—We are not getting any further. Why do you want to supplement your grass pulp with wood pulp?

*Sir W. Carey.*—For pushing production. Sometimes wood is necessary for its softening quality in certain grades. You have got what we call a furnish in paper just as you have got a patch in a jute mill.

*President.*—In answer to Question 35 you say "We are now on the point of receiving concessions from the railways for rail freights on grass." Can you tell us what it amounts to?

*Sir W. Carey.* In the case of these railways that have given the concession it amounts to two annas a maund at present, but there are other railways which have not yet given any reduction. We hope they will also come into line.

*President.*—By how much will these freights you have given us in answer to Question 20—Rs. 13-8 on the average—come down?

*Sir W. Carey.*—Those were the old freights. It will come down by Rs. 3-8.

*President.*—That makes a considerable difference?

*Sir W. Carey.*—Yes.

*Mr. Ginnala.*—That is about a quarter?

*Sir W. Carey.*—Yes; from 11 annas to 9 annas and in another case from 9 annas to 7 annas. I may say that this was a suggestion put forward by the Indian Industrial Commission in 1916 when we then applied for assistance.

*Mr. Ginwala.*—Is this concession on grass only?

*Sir W. Carey.*—Yes. We applied for a reduction on coal, but we have not got it yet.

*Mr. Ginwala.*—In answer to Question 13 you say "Owing to the competition of imported papers we are only now consuming at the rate of 20,000 tons."

*Sir W. Carey.*—Our mill production has gone down to 1,250 tons per month for the two mills together. We can produce 1,500 to 1,600 tons per month.

*Mr. Ginwala.*—But I do not understand that. What has that got to do with the reduction in your production?

*Sir W. Carey.*—The imported papers competition is so keen that we cannot sell more than 1,250 tons a month of our paper whereas we are prepared to sell 1,600 tons.

*Mr. Ginwala.*—That is to say, you are prepared to lose on 1,250 but not on 1,500 a month, that is what it comes to?

*Sir W. Carey.*—It is no use manufacturing for stock; we have gone into stock as far as we can carry and further, and now we have to reduce our output.

*Mr. Ginwala.*—I see. Then I find from the proportion that you have given that you have to use  $1\frac{1}{4}$  tons of wood pulp for every ton of finished paper.

*Sir W. Carey.*—Yes.

*Mr. Ginwala.*—Is that the average wastage? Isn't it a little high?

*Sir W. Carey.*—I think it should be  $1\frac{1}{4}$  tons: that is the actual result of our experience.

*Mr. Ginwala.*—That may be, but I want to know whether something is missed out; where does the wastage occur; is it during the bleaching process or during the paper making process?

*Mr. Bellamy.*—15 per cent. in bleaching and 10 per cent. in the paper making process.

*Mr. Ginwala.*—I have not got the figures here, but it does seem to me as though it is a good deal more than it need be. I don't see why the wastage is more. You put so much of chemicals and other things which add to the quantity, and my recollection is that, taking the additions into account, there is a very slight wastage in the process. You have got the same thing in your unbleached pulp. You use  $26\frac{1}{4}$  cwt; that is about the same proportion—a third?

*Mr. Ginwala.*—Yes.

*Sir W. Carey.*—These are the calculations which we work on.

*Mr. Ginwala.*—I don't dispute that at all. I am suggesting that it may be much lower. I think from the evidence that was placed before us by the India Paper Pulp Company that they use only one ton of unbleached pulp to one ton of paper. The wastage may be made good by chemicals.

*Sir W. Carey.*—We don't calculate in that way. It is only a matter of method.

*Mr. Ginwala.*—It is not a calculation at all; it is a result.

*Sir W. Carey.*—If we were to add the other figures, we could also show the result in the same way.

*Mr. Ginwala.*—They say that they use only one ton of unbleached pulp to one ton of paper.

*Sir W. Carey.*—That is impossible in any country in the world.

*Mr. Ginwala.*—Why do you say so?

*Sir W. Carey.*—The very best English, American or German practice does not show that.

*Mr. Ginwala.*—I am sure that they don't lose 33 $\frac{1}{3}$  per cent.

*Sir W. Carey.*—25 per cent. is the most that we have calculated here.

*President.*—Could you refer us to any authoritative book on the subject?

*Sir W. Carey.*—These are what we consider to be our actual working figures. If we add the figures for rosin, size and so forth, we should get very different figures too. We can get you those figures.

*President.*—You make or buy a certain amount of pulp in a year out of which you produce a certain quantity of paper. If in fact the chemicals used actually increase the weight of the pulp, you could make more paper out of the same pulp. Do you mean to say that it is not possible?

*Sir W. Carey.*—It is not pulp.

*President.*—You have got in the end 1,000 tons of paper out of 1,000 tons of pulp. Admittedly some of the pulp has gone to waste.

*Mr. Ginwala.*—I can understand that, in the case of the imported wood pulp you use, it may be that it gets dried. Supposing you get 100 tons, you go by the quantity. That I can understand, but in the case of your own pulp, I cannot understand it.

*Sir W. Carey.*—10 per cent. moisture is allowed anyhow.

*Mr. Ginwala.*—It is wet pulp that you bleach and make paper out of. Why should there be so much wastage?

*Sir W. Carey.*—It is a question of method. Different mills have different calculations.

*President.*—What does your method mean? Does that mean that if you use 1,000 tons of pulp, which you may buy or manufacture, you only get 750 tons of paper in the end?

*Sir W. Carey.*—Yes, if you only take the fibre from the pulp. If you add to that other things, you get your 1,000 tons.

*President.* What you mean is this: having bought or made 1,000 tons of pulp, you will have at the end 1,000 tons of paper but there will be only 750 tons of fibre incorporated in it.

*Sir W. Carey.*—The rest is chemicals, clay, etc.

*President.*—What you lose in pulp is replaced by the chemicals you put in?

*Sir W. Carey.*—It must be, because you have got to get 1,000 tons of paper.

*President.*—There is no reason why the weight of the chemicals should be exactly equal to the weight of the pulp you lose. There is no reason why that should be so. It does not necessarily follow.

*Sir W. Carey.*—They don't actually agree. Every process in the paper manufacture entails some loss or waste.

*Mr. Ginwala.*—You are losing nearly 50 per cent. You lose one-third of the pulp and you use chemicals, viz., rosin, clay and bleaching powder. That represents about 25 per cent. of the paper, does it not?

*Sir W. Carey.*—Yes, on these figures.

*Mr. Ginwala.*—No, on your figures. That you lose because you get only one ton of paper. You lose  $\frac{1}{3}$ rd of a ton of pulp and a quarter of a ton of rosin, sizing and loading. That means you lose nearly 50 per cent.

*Mr. Wood.*—Wood pulp gives you 75 per cent. of the original weight put in, sizing 5 per cent. goes from the paper, and waste paper which is continually going round 5 per cent.

*President.*—Part of the waste paper is continually being recovered?

*Mr. Wood.* Yes.

*Mr. Ginwala.*—Let us get it properly. Take your chemicals. You have given us the proportions. I think that there is a good deal more that has to be accounted for. How much per cent. of bleaching powder do you use?

*Sir W. Carey.*—12 to 13 per cent.

*Mr. Ginwala.*—What percentage of other principal chemicals do you use in loading?

*Sir W. Carey.*—6 to 8 per cent. (that is rosin and alum).

*Mr. Ginwala.*—And China clay?

*Sir W. Carey.*—10 per cent.

*Mr. Ginwala.*—How much do you put in?

*Sir W. Carey.*—We have to put in 16 per cent. to get 10 per cent.

*Mr. Ginwala.*—These are the three principal chemicals. That makes 37 per cent.

*Sir W. Carey.*—Yes.

*Mr. Ginwala.*—How much do you recover in bleach?

*Sir W. Carey.*—There is no retention in that.

*Mr. Ginwala.*—The wastage comes to 62 per cent.—37 per cent. in chemicals and 25 per cent. in pulp. Now I want to know what happens to this 62 per cent.

*President.*—Suppose you start with  $1\frac{1}{2}$  tons of pulp and you add chemicals. What is your figure for the weight of chemicals you add?

*Sir W. Carey.*—37 per cent.

*President.*—Do you accept that?

*Sir W. Carey.*—Yes, including the bleach which yields no weight but only gives colour.

*President.*—If you add these chemicals, what do you finish with?

*Sir W. Carey.*—One ton of paper.

*President.*—Let us start again. You start with  $1\frac{1}{2}$  tons of pulp and then you add 37 per cent. of chemicals. What do you finish with?

*Sir W. Carey.*—We finish with 37 per cent. of paper more. I was talking of fibre to fibre, but we make it up by the mixture of chemicals.

*Mr. Ginwala.*—It has given me a lot of trouble to understand it like that. I doubt whether I understand it even now.

*Sir W. Carey.*—You will get it absolutely clear in 10 minutes' talk with an expert in Calcutta.

*President.*—After all, what we are interested in is not fibre to fibre but is this. You turn out a certain quantity of paper at the end of the year. We are not concerned with what is in that paper. We are concerned with how much pulp you have to use in order to get that quantity. That is what we are fundamentally interested in.

*Sir W. Carey.*—We shall recast the answer in that way.

*Mr. Ginwala.*—Your reply to question 16 does not answer it in the sense in which we put it. What you say is that you have got 10/12 lakhs of maunds of grass in your fields. That is not much more than your requirements at present.

*Sir W. Carey.*—That is so in our own fields. We have quite enough for our requirements with a considerable margin.

*Mr. Ginwala.*—It is not very considerable because you require 11 lakhs.

*Sir W. Carey.*—Only 8 lakhs maunds of grass we reckon as our present consumption.

*Mr. Ginwala.*—That is on the present output of 18,000 tons?

*Sir W. Carey.*—That is our full output which is 1,500 to 1,600 tons a month.

*Mr. Ginwala.*—You say in your answer to Question 17, you have only a supply of 11 lakhs of maunds.

*Sir W. Carey.*—On a full output of 18,000 tons of paper in a year, we should use only 8 lakhs maunds of grass with our present process.

*Mr. Ginwala.*—That is if you continue to use the imported pulp?



Sir W. Carey.—With 8½ lakhs maunds of grass, we could reduce our imported pulp to some extent.

Mr. Ginwala.—Supposing you use no imported pulp, that would hardly be enough.

Sir W. Carey.—I don't think that it is a practical proposition to make paper with only grass because wood pulp as we said this morning is required for certain things. We have 25 to 35 per cent. margin of our own requirements in our own fields.

Mr. Ginwala.—You qualify that statement by saying 'provided it paid to work out the additional quantity which at present it does not at the price.' We can get anything in the world. We did not put that in that sense at all.

Sir W. Carey.—What you want to know is what is the approximate estimate of the total quantity available?

Mr. Ginwala.—That is to say, commercially available.

Sir W. Carey.—With this additional protection which we are asking for it might be quite understandable that we should put up a mill to work the fields in the Western Circle. It would be possible to make it into pulp and then turn the pulp into paper, if the grass is manufactured into pulp on the spot. With regard to the Sahebganj and Nepal fields, at the present selling price, we should not increase our output very much. With regard to the rest of India we simply state here that further supplies undoubtedly could be found. One receives offers of grass very often. There is another proposal for a pulp mill in the Punjab to-day. The promoter states that he has sufficient grass to supply him. I have of course not been able to check it. We ourselves are not interested in it. Undoubtedly there are further fields in the Central Provinces and also down towards Madras. I am only speaking now with reference to *sabai*. I don't think that *sabai* has been prospected for the whole of India. We have heard of it in the West Coast as well.

Mr. Ginwala.—Not much there.

Sir W. Carey.—Probably not. But there is a margin which I say has not been looked for. I think that we can reckon that there would be another 10—12 lakhs maunds available in India. It would need prospecting of course. In a huge country like India with varying conditions, it is impossible to arrive at an estimate. The Forest Department would probably be able to find it out.

May I read to you what our grass contractor says on the subject :—

"We give below the quantities which we have extracted from the following areas in the past :—

	Maunds.
(1) Sahebgunge . . . . .	450,000
(2) Nepal . . . . .	460,000
(3) Eastern Circle of Gonda and Bahraich . . . . .	80,000
(4) Ramnagar and Bettiah Forest . . . . .	70,000
(5) Rewah . . . . .	35,000
(6) Hazaribagh . . . . .	15,000

Of the above forests, excepting Sahebgunge and Nepal, the other areas had not been worked to their full capacity as your requirements were fully met by us on the existing scale of working. There is no doubt that considerably greater yield can be obtained from these areas if desired.

We also know of several other forests, e.g., Sambalpur, Cuttack, Raigarh, Pendra Road, Tori, Dudi, Sonui, and Chhindwara whence *sabai* grass on a commercial scale can be secured.

We can assure you that there is no dearth of *sabai* grass and you can readily obtain any quantity of this material suitable for your purpose.

The above has been written on the basis of our long experience in the *sabai* grass business extending since 1888."

*Mr. Ginwala.*—As regards your reply to question 19: you pay the largest amount of royalty as far as the Western Circle is concerned and it is furthest from your mill. What was the idea of having got that? Is it more recent than that of Nepal so far as you are concerned?

*Sir W. Carey.*—More or less about the same time.

*Mr. Ginwala.*—Did you start working at about the same time?

*Sir W. Carey.*—We did not ourselves. It was previously worked by other people.

*Mr. Ginwala.*—You pay Rs. 1,77,500 for about 4 lakhs of maunds, and the distance is nearly twice as much.

*Sir W. Carey.*—Our answer to No. 23 (a) (c) explains that.

*Mr. Ginwala.*—You say that this field was acquired at about the same time as Nepal. At that time, you must have arranged to pay royalties.

*Sir W. Carey.*—It was a policy of assuming raw materials for our mills. At that time owing to competition the price of imported pulp went up during the war and there was great competition for the *sabai* grass.

*Mr. Ginwala.*—When did you acquire the Western Circle?

*Sir W. Carey.*—The actual transfer was made in 1920.

*Mr. Ginwala.*—That is very recent.

*Sir W. Carey.*—Comparatively, yes. The price of wood pulp at that time was £60.

*Mr. Ginwala.*—We may take it at about Rs. 8-8-0 a ton and then your freight must be really double.

*Sir W. Carey.*—Our freight is 9 annas a maund.

*Mr. Ginwala.*—In the Western Circle?

*Sir W. Carey.*—Yes.

*President.*—That is the reduced freight you get under the recent concession?

*Sir W. Carey.*—Yes.

*Mr. Ginwala.*—What is the freight from Nepal?

*Sir W. Carey.*—7 annas.

*Mr. Ginwala.*—But the distance is 400 miles more: are you getting any special rate for longer distances?

*Sir W. Carey.*—It is because railways like business.

*Mr. Ginwala.*—Is it the same railway?

*Sir W. Carey.*—It is partly the East Indian Railway, partly the North Western, partly the Oudh and Rohilkhand Railway, partly the Bengal and North Western Railway, and partly the Eastern Bengal Railway. As a matter of fact, taking the whole thing, I suppose they find it on the average advantageous.

*Mr. Ginwala.*—In answer to Question 20, you have given the cost at Rs. 60 delivered at the mill for a ton of grass.

*Sir W. Carey.*—That was so in 1922-23.

*Mr. Ginwala.*—Now?

*Sir W. Carey.*—In any year that we were able to work in full it should be reduced by about Rs. 6 or Rs. 7 at least. The other charges will be the same.

*Mr. Ginwala.*—May we take it at Rs. 55?

*Sir W. Carey.*—You may put it at Rs. 53 on a full year's working.

*Mr. Ginwala.*—I want to make a comparison between that an *esparto*, just to see how you are situated with regard to manufacture. I think the yield from *esparto* may be taken at 45 per cent.

*Sir W. Carey.*—It is 35 per cent.

*Mr. Ginwala.*—If you take it at 35 per cent. it becomes more unfavourable to you. I thought 40 to 45 would be more reasonable.

*Sir W. Carey.*—Yes, then we will take it at 40 to 45 per cent.

Mr. Ginwala.—Your yield may be taken at 85 per cent.?

Sir W. Carey.—Yes.

Mr. Ginwala.—You see in Great Britain they import *esparto*. The c.i.f. price in the United Kingdom is £6-10 which is about Rs. 95.

Sir W. Carey.—Yes.

Mr. Ginwala.—Against your Rs. 53. What I am trying to point out is that you are more favourably situated with regard to your raw materials, even though the cost is high. In Great Britain they manufacture pulp out of *esparto* and even then they can manufacture paper and undersell you.

Sir W. Carey.—It is difficult to ascertain whether English mills sell at the price at which they manufacture or whether they sell their surplus only at cost rates.

President.—Is the bulk of the paper imported from England made from *esparto* grass?

Sir W. Carey.—*Esparto* mills do not make paper of *esparto* grass only. They probably use a much larger proportion of wood pulp than *esparto*.

Mr. Ginwala.—You could do the same. We are trying to make a comparison and to see in what respects you suffer in the process of manufacture. Why are you unable to manufacture your pulp at the same rate as the British manufacturers from *esparto*, their materials being more expensive than yours.

Sir W. Carey.—I am unable to say personally. We shall get the figures as to the probable proportion of actual *esparto* grass and wood pulp that is put in the so called *esparto* papers. In any case *esparto* papers are not the papers that are competing with us here. They are mostly consumed on the Continent and in England. We are competing here actually with what I might call wood pulp paper only. There is a certain quantity of *esparto* paper coming in but it is only very small.

Mr. Ginwala.—What I understand the position to be is this. The kind of paper that should ordinarily compete against you is paper made out of grass, but as it happens the wood pulp paper is cheaper, and therefore it is really used as a substitute. But the paper that is really supposed to compete against you is *esparto* paper.

Sir W. Carey.—But that does not come. In real practice the actual paper that we have to compete against is wood pulp paper.

Mr. Ginwala.—Are you sure upon the figures you have got?

Sir W. Carey.—We can establish that.

Mr. Ginwala.—We should like you to establish that.

Sir W. Carey.—We will give you the figures.

Mr. Bellamy.—Messrs. Alexander Pirie & Co. specialise in *esparto* writing papers, but very little of their paper is to be found on the market to-day purely on account of prices. They ask a price round about 4½ as. a lb. which the Indian importers are not prepared to pay in view of the fact that they are able to buy a similar class of paper made out of wood pulp at six pices per lb. cheaper.

President.—That corresponds with the impression in my mind.

Mr. Bellamy.—Yes.

Mr. Ginwala.—So far as Great Britain is concerned, they manufacture paper from imported wood pulp?

Sir W. Carey.—Yes.

Mr. Ginwala.—That also must be a little more expensive for them.

Sir W. Carey.—No. They have practically no chemicals. They have half the stuff on the mill, half the plant, and half the capital cost because all they have to do is to break up the pulp and make it into paper. No soda and no boiling.

Mr. Ginwala.—That could be done in this country.

*Sir W. Carey.*—If we could get wood pulp at pre-war price compared with to-day's grass price or anything like it, of course we should use it.

*President.*—Mr. Ginwala's point is different. After all, in what respect is the Indian manufacturer worse off than the British manufacturer in making paper out of imported wood pulp to-day? He will probably have to pay more for imported pulp, but he has not to pay the freight which the foreign manufacturer has to pay on conveying his paper to the Indian market.

*Sir W. Carey.*—£14-15 is the price including freight (c.i.f.).

*President.*—The price you gave us was £14-6.

*Sir W. Carey.*—You mean to say that, if we were to use only imported pulp, we ought to make paper at the same price as the British manufacturer?

*President.*—Yes.

*Sir W. Carey.*—But we have got to pay 10 per cent. freight on the pulp which is wasted on account of moisture.

*President.*—In this respect you and the British manufacturer are in exactly the same position.

*Sir W. Carey.*—Works costs in other directions are different.

*Mr. Ginwala.*—Compared to your figures, that does not include any overhead charges; your pulp is more expensive to you than the imported pulp.

*President.*—There is this to be said that it is not the British manufacturer that is the most formidable competitor, but the Continental manufacturer.

*Sir W. Carey.*—It is the Norwegian, Swedish and German mills. What is being done as a matter of fact is that very largely—we are able to prove this to some extent—Continental paper is being sent out through England and is being imported here by the British importer.

*Mr. Ginwala.*—Anyhow it struck me that you are not at any particular disadvantage in respect of raw materials, or imported pulp.

*Sir W. Carey.*—We would use imported pulp if we did not pay any extra for it.

*President.*—But the British manufacturer has to pay freight to India on the finished paper.

*Sir W. Carey.*—But then it is doubtful whether he sells at the price at which he makes. In fact it is more than that. The British Paper Trade Review says "It is impossible to produce white printings from sulphite wood pulp at less than 9½d. We know from prices at which they are selling in India they must be selling under cost." But if there is any other information you want on this point we can give it to you.

*Mr. Ginwala.*—Let us go to 23 (c) where you are talking of the establishment of a paper mill. What I would like you to do is to work out a sort of proposition statement to show how it is going to work and whether you would be able to produce your pulp and paper cheaper eventually.

*Sir W. Carey.*—By working grass ourselves?

*Mr. Ginwala.*—Yes. You could say, for instance, that for coal you may have to pay Rs. 20 more on freight but on the grass you may save so much.

*Sir W. Carey.*—I do not quite follow.

*President.*—In commercially exploiting your Western Circle areas you have proposed the erection of a pulp mill near the fields. Have you worked the figures out in detail showing that in certain respects your costs would be higher, and in other respects lower?

*Mr. Ginwala.*—It must be reasonably accurate. You have got all your raw materials in one area.

*Sir W. Carey.*—Supposing we put up a paper mill we have preliminary figures only.

*Mr. Ginwala.*—You have got these three fields and you will say that you are going to put up a mill at a place so many miles distant.

Sir W. Carey.—This will be in the Western Circle only where we have got 12 lakhs of maunds. We can make so much. The amount of grass required to produce 10,000 tons of pulps is 24,000 tons. For the purpose of this the following figures have been taken:—

	Tons.
Saharanpur Division . . . . .	13,000
Lansdowne Division . . . . .	5,500
Kalagarh Division . . . . .	3,500
Ramuagar Division . . . . .	2,000
<b>TOTAL</b>	<b>24,000</b>

These figures by no means represent all that can be obtained. The costs are given in the report and we reckon the average cost at Rs. 24 a ton for 24,000 tons delivered at the mill site. After that it is a question of technical working which is done partly by electric power.

Mr. Ginwala.—Will you work out a proposition statement and let us have it?

Sir W. Carey.—Yes.

Mr. Ginwala.—In answer to question 26, you have not categorically answered the statement made by Mr. Pearson. You have just walked round them. Take the statements one by one because you see this is an opinion which has always been given against the mills.

Sir W. Carey.—I am not sure what the date of this opinion was.

Mr. Ginwala.—It was made at the time you gave evidence in 1922 before the Fiscal Commission.

Sir W. Carey.—A great deal has been left out which he did not know about the supplies.

Mr. Ginwala.—I do not follow your answer. Our idea was that you should categorically answer these statements which are made against the industry. An explanation is not much use for the purpose. The first statement is "They have hardly got sufficient grass to work up to their full capacity." What do you say to that?

Sir W. Carey.—At the present moment I say that is not the case.

Mr. Ginwala.—Have you really got over the difficulty?

Sir W. Carey.—Absolutely. We expect in the coming season to get 9 lakhs of maunds from our own fields by our own "bandobust"—or by contractors—without any difficulty.

Mr. Ginwala.—Without increasing the cost?

Sir W. Carey.—We expect to reduce the cost as compared to the time when Mr. Pearson gave evidence, previous two years. That is one of the things to which we are looking to reduce our cost.

Mr. Ginwala.—The next statement is "If they want to expand, it might be done by importing sulphite spruce or by using other raw materials."

Sir W. Carey.—There is no need to do that at present.

Mr. Ginwala.—Then he says "Another point is that during the last ten or twelve years there has been intensive cropping and the grass has deteriorated considerably." That is a very important point.

Sir W. Carey.—There have been periods when fields in the contractors' hands have suffered, but that difficulty has been definitely seen and has been got over. There is no reason why *sabai* should deteriorate. I think we have said that.

Mr. Ginwala.—Then he says "It is therefore questionable whether the pulp industry which has been going on for 40 or 50 years could really continue, even if the paper making industry did not expand at all." You do not agree with that?

*Sir W. Carey.*—No. We look forward to see the use of present materials, if nothing better offers or nothing cheaper, going on indefinitely.

*Mr. Ginwala.*—Supposing the cost of the raw materials did go up and bamboo came in, can you convert your plant?

*Sir W. Carey.*—Yes..

*Mr. Ginwala.*—Without much capital?

*Sir W. Carey.*—Without excessive capital expenditure. We are so advised.

*Mr. Ginwala.*—I think one company said that it can not be done without substantial alterations.

*Sir W. Carey.*—It means considerable alterations, but they are not very costly.

*Mr. Ginwala.*—Which portions of the machinery will have to be altered?

*Sir W. Carey.*—Preparing plant only. It will mean additions, not very large additions, not very heavy additions and alterations—which would be considerable but not necessarily very radical.

*Mr. Ginwala.*—Will the capital be forthcoming for the purpose?

*Sir W. Carey.*—Not under present conditions, not without some means of getting some money together. We have of course a plant which we could incorporate.

*Mr. Ginwala.*—With regard to bamboo I have got some questions to ask. You still mention this objection about the bamboo flowering. Surely it used to be an objection, but does it really hold good now?

*Sir W. Carey.*—I think the Forest Department should be the best guide. Our own feeling would be that in going into bamboo pulp we should never be held up by flowering sufficiently to make it impossible to work. It flowers, we understand in sections—never in whole big areas at the same time.

*Mr. Ginwala.*—Then it may be assumed that it need not be taken into account now?

*Sir W. Carey.*—I should think so.

*Mr. Ginwala.*—Do you accept the estimates that have been made by the experts, say, by Messrs. Raitt and Pearson, about the possibilities of bamboo, namely that there is sufficient bamboo in India to supply pulp to the whole world? What is the opinion of your own expert advisors? We are also going to see Mr. Raitt and Mr. Pearson, but how have you been advised about the possibilities of making pulp from bamboo?

*Sir W. Carey.*—From such enquiries as we have made there seem to be quite a number of areas and the supply of bamboo is, I think, established to be replaced in regular rotation, where it is cut on a big scale, every 3 or 5 years according to the quality of bamboo, and I don't see any great difficulty myself.

*Mr. Ginwala.*—Can it reasonably compete against chemical wood pulp at the present price?

*Sir W. Carey.*—The whole of the figures are very different from what they were in 1913-14, or even from the intermediate figures in 1917-18, but I think you may say that at the present figures of cost of plant, cost of labour, cost of extraction, cost of chemicals and so forth, there is no reason why bamboo pulp should not be manufactured in this country on a big scale to compete with European pulp.

*Mr. Ginwala.*—That is the point. Supposing India was exporting pulp, it would compete mainly, I take it, with wood pulp?

*Sir W. Carey.*—Yes.

*Mr. Ginwala.*—In that case the point is, will India be able to export to a place where, say, the Canadian, Norwegian or other pulp is exported, and will India be able to compete?

*Sir W. Carey.*—I think our answer to question 29 has to be taken into account there. It is a subject which I may say has interested us very much

indeed, namely the rate at which exhaustion of pulp forests in Canada and Europe is going on. It all depends upon that.

*Mr. Ginwala.*—Do not talk of exhaustion; if one is exhausted the other can charge anything it likes. We are talking of the immediate present. Assume that everything is normal.

*Sir W. Carey.*—We tried to get figures based upon our own experience.

*Mr. Ginwala.*—For bamboo?

*Sir W. Carey.*—Yes.

*Mr. Ginwala.*—You told us just now that you will land your pulp at Rs. 200 a ton.

*Sir W. Carey.*—That is from grass.

*Mr. Ginwala.*—That is unbleached?

*Mr. Ginwala.*—Have you not worked your Burma proposition?

*Sir W. Carey.*—That is entirely different.

*Mr. Ginwala.*—Can the Burma pulp compete?

*Sir W. Carey.*—Rs. 237-8-0 is the imported price to-day and if you take Burma pulp at Rs. 240, of course that includes very full depreciation and profit on the working and that sort of thing—

*Mr. Ginwala.*—If you have to export where are the other charges to come from?

*Sir W. Carey.*—As I say, that is just an estimate.

*Mr. Ginwala.*—We have got to consider what eventually are the possibilities of this industry.

*Sir W. Carey.*—What I meant to say is this, that there is no protection in this price of Rs. 237-8-0, as it is to-day. If you put 20 per cent. on, you will have to add Rs. 40 on it.

*Mr. Ginwala.*—We are not on that point now.

*President.*—*Mr. Ginwala* is thinking of the possibility of bamboo pulp competing with wood pulp in the world's market.

*Sir W. Carey.*—I may say that the present price of wood pulp is lower than it has been for some considerable time, and is not expected to remain where it is. In our own calculations in talking about the possibilities of a bamboo pulp mill in Burma we were informed at that time after very careful enquiries by the very best people that we could get in touch with in Europe, that we could in future reckon on a minimum price for imported wood pulp of £17 a ton. That was the ruling price for wood pulp on an average after the war,—more or less a permanency as the lowest ruling price—and on that we proposed to work. Of course the present price is exceptional. As a matter of fact we had telegrams a week before we left Calcutta urging us to buy now, because the present slump was over and the prices looked like going up and staying up.

*Mr. Ginwala.*—At £17, and from that you have to take off for freight and other charges?

*Sir W. Carey.*—Yes, say 45 shillings.

*Mr. Ginwala.*—And another 10 shillings for other charges?

*Sir W. Carey.*—Yes.

*Mr. Ginwala.*—Is it f.o.b.?

*Sir W. Carey.*—£17 a ton c.i.f. Calcutta.

*Mr. Ginwala.*—You have got to take off £2 from that because freight from there is less?

*Sir W. Carey.*—Yes.

*Mr. Ginwala.*—That comes to £15.

*President.*—If the c.i.f. price is £17 out here, the f.o.b. in Europe will be £15. To sell bamboo pulp at the same price in Europe you have got to start with an f.o.b. price of £13 in Burma.

*Sir W. Carey.*—We get wood pulp here at the equivalent of the Home price.

*President.*—Pulp starts from somewhere else; its home is not in England.

*Sir W. Carey.*—Quite so; but then of course one need not necessarily look to the European markets. Pulp goes from Europe as far as Australia, China, Japan.

*Mr. Ginwala.*—Where will you export to? That is what we want to know.

*Sir W. Carey.*—In talking of the export of bamboo pulp I should certainly be inclined to look towards the markets in the direction of Australia, China, Japan and so on.

*Mr. Ginwala.*—You will have to give us some basis to go upon. The point is that both Messrs. Raitt and Pearson say that it is a practical proposition, and that India can export pulp to the foreign market, and not only that but that India can supply the whole world.

*Sir W. Carey.*—Quite so.

*Mr. Ginwala.*—I don't see from the figures that you have given that there is anything in that.

*Sir W. Carey.*—You mean the possibilities of export?

*Mr. Ginwala.*—Yes.

*President.*—After a good deal of care you selected what seemed the best proposition, but there is not much in it for export purposes?

*Sir W. Carey.*—I would not like to say that Burma is the best proposition. There are other people who have made experiments and enquiries in other provinces in India with which of course we did not concern ourselves. We simply looked on what we thought as the best site in Burma.

*Mr. Ginwala.*—You know what the experts from Mr. Sindall downwards have said about bamboo pulp. All emphasized that the Burma bamboo is cheaper, that it is a very good proposition and that pulp can be manufactured and exported to foreign countries at a profit. If you accept their figures, the figures will look all right. But coming to grips with the question from the practical point of view, we have seen no evidence to speak of to show that so far.

*Sir W. Carey.*—The difficulty is the varying cost as compared with anything that happened in the years gone by. The difficulty is that you have got to make fresh experiments.

*Mr. Ginwala.*—That is quite true, but we must have something to go upon.

*Sir W. Carey.*—We must necessarily not make up our own figures for a thing like this. We must allow ourselves a very reasonable margin. It is impossible to commit ourselves to cost of bamboo when we do not know what it will actually cost.

*Mr. Ginwala.*—I am not asking you to do any business on the figures that you have given. What I say is that it has been stated that this industry deserves protection not only because of its present condition but because of its possibilities. That is one of the reasons given. Well, one cannot see what these possibilities are: where is the evidence?

*Sir W. Carey.* If you will allow me to say so, with the protection that is asked for, you can get your bamboo pulp with sufficient interest on capital and depreciation and a profit as well, over and above that.

*Mr. Ginwala.*—With protection you can always get a profit within certain limits. That is not the point. The point is that, considering it from the export point of view, I do not see that much evidence has been given so far to show that it has got big possibilities.

*Sir W. Carey.*—I don't think that myself.

*Mr. Ginwala.*—Nor do I theoretically, but I am talking of the evidence.

*President.*—What it really comes to is this. Is the export of bamboo pulp an immediate proposition, or has it got to wait until the price of wool pulp has risen substantially?



*Sir W. Carey.*—I think, on the figures that you have had put up before you by others and our own estimate, there is no reason why bamboo pulp should not compete in the East for instance to start with. You cannot expect the thing to grow up like a mushroom.

*Mr. Ginwala.*—Will you work it out in figures?

*Sir W. Carey.*—I have already given you some.

*Mr. Ginwala.*—Those figures do not establish the proposition at all.

*Sir W. Carey.*—As I said, we have allowed a very considerable margin.

*Mr. Ginwala.*—Even as an estimate it does not establish the proposition.

*Sir W. Carey.*—What would you consider a fair figure of competition between Rs. 237-8 and to-day's low price of imported pulp? It is £14 at Home to-day, that is Rs. 210 at Home. You have got to take off that £3 freight and charges, that is Rs. 45; that comes to Rs. 165.

*Mr. Ginwala.*—What I want you to do is this: your figure is Rs. 237-8. Here is Australia: it imports so many tons of pulp. What I want you to do is to show, if you can, that this is the price at which they are getting wood pulp and this is the price at which you can sell your bamboo pulp. That is all we want.

*Sir W. Carey.*—We will send that up to you. We have not looked at it from that point of view. No doubt it may be obtained. Up to now we had only figures to supply our own needs.

*Mr. Kale.*—In answer to Question 20 you have given various figures as the cost of raw materials, etc., and in 20 (b) you have stated that you employ 16,000 hands but you have not stated the arrangement of wages. Are we to understand that the wage is about Rs. 12? What we asked for in (b) was the cost of labour. That you have not given us.

*Sir W. Carey.*—The labourer earns to-day from 12 annas to a rupee a day. The trouble is that they do not work a full month, neither do they work for continuous series of months; they come and go just as they choose.

*President.*—Is the labour included in the payments to contractors?

*Sir W. Carey.*—No, we pay them ourselves.

*Mr. Kale.*—You must know what the cost is per ton. You have given the cost per ton of royalty, of railway freight and so on, otherwise the statement is not complete.

*Sir W. Carey.*—In addition to the number of labourers given we have been advised from Nepal that they also employ 15,000 hands there.

*President.*—We are not concerned with the number. Can you give us an approximate figure showing how much of this sum of Rs. 31 is the cost of labour?

*Sir W. Carey.*—We can get that for you.

*Mr. Kale.*—Can you give us figures for the maximum price that you can afford to pay for your grass and yet compete, other things remaining the same? Suppose there is no protection and yet you wanted to compete, what will be the maximum price of grass that you can pay?

*Sir W. Carey.*—We anticipate that we can get down to Rs. 1-14 to Rs. 2 per maund into the mill and we shall still require protection, that is cutting it as low as we can. We have got down considerably already, but for the next season, for full working we expect to reduce the cost to Rs. 2 per maund.

*Mr. Kale.*—That is about Rs. 54 a ton?

*Sir W. Carey.*—Yes. With conditions prevailing in labour we do not anticipate cutting much lower.

*Mr. Kale.*—You say that there is an ample supply of raw materials, particularly *sabai* grass, and you also agree that it is more or less a question of price. Taken by itself, the supply may be unlimited, but as an economic proposition, supply means supply at a particular price, so that, unless you

are able to bring down the cost of raw material a great deal, you cannot say that the supply of raw material is unlimited?

*Sir W. Carey.*—The figures that we have given refer to our own areas for our own mills. Other mills, it is quite possible, might be able to get grass at a lower price than we are getting or even hope to get.

*Mr. Kale.*—We have been told that there is competition.

*Sir W. Carey.*—Only from those sides of the country where the mills are. In order to stop that competition we have supplied ourselves with our own basis in order to put a period on that. In the old way a lease was put up annually to tender, and competition year by year drove the price up either between ourselves and other mills, or between our contractors and other contractors. That is why we took these steps. Now we know that we are assured at any rate for a number of years of the full supply of grass at a certain figure.

*Mr. Kale.*—In which there will be no competition?

*Sir W. Carey.*—No competition for ourselves. We supply ourselves; therefore the other mills will not compete with us for the same supplies of *sabai*. They will supply themselves from other fields.

*Mr. Kale.*—Have you in any way gone into the fields from which other old mills used to draw? What I want to ascertain is whether they will have difficulty in getting their supplies because you have assured yourselves of the supply.

*Sir W. Carey.*—No, they have their own supply. What happens at the present moment is that they sometimes make contracts with our contractors and take grass from them. I don't think they have any difficulty in getting their full supply.

*Mr. Kale.*—The price has gone up.

*Sir W. Carey.*—That is not our fault. It is the fault of general competition.

*Mr. Kale.*—Do you think that the price at which you will be able to buy or the old mills, as you call them, will be able to buy, will be a reasonable price?

*Sir W. Carey.*—We anticipate that the price will come down to two rupees a maund.

*Mr. Kale.*—Do you think that that is a reasonable price? Or do you think that you ought to be able to get below that?

*Sir W. Carey.*—Under present conditions I don't think that we can get below that.

*Mr. Kale.*—What was the pre-war price?

*Sir W. Carey.*—Rs. 1-4-6 a maund. It is about the average rise in all other things.

#### *B.—Auxiliary.*

*President.*—You have mentioned China clay both in the list of imported materials and in the list of articles manufactured and purchased in India. Does the Indian China clay come from Seraikele?

*Sir W. Carey.*—From Chaibasa, Chakradapur.

*President.*—What has been your experience of the China clay that is produced in India? Has it given for satisfaction?

*Sir W. Carey.*—As regards price it competes with the Home clay.

*President.*—The other paper making concerns said that its quality was not satisfactory.

*Sir W. Carey.*—Our experience has been that it has certain disadvantages as compared with the Home clay. It is not quite so clean, but the loading into the paper has been variously reported at being two or three per cent. more than what English clay will carry in. We are at present engaged

in making a complete test as between English clay at to-day's price and Indian clay at to-day's contract price. We are running a complete test in both our mills to ascertain exactly which costs us least.

*President.*—Meanwhile you are using both?

*Sir W. Carey.*—Yes, but we used Indian clay exclusively at the time of war when we could not get English clay. It has been so far a matter of division of opinion among technical men whether it is good or bad as compared with the imported stuff.

*President.*—Then, you mention the acid that you use for the manufacture of paper. Is that sulphuric acid?

*Sir W. Carey.*—Yes.

*President.*—What other acid do you use?

*Sir W. Carey.*—Hydro-chloric acid. That is for bleaching.

*President.*—What is the alkali you use?

*Sir W. Carey.*—Either Magadi soda or imported soda ash or our own caustic which we manufacture.

*President.*—In answer to Question 37 (b) you have given the quantities of the various auxiliary raw materials which you require per ton of paper. I don't think that any other firm has given us that. The total comes to nearly 93 ton per ton of paper. I had no idea that the total amount of materials used was so high.

*Sir W. Carey.*—We probably use more because we manufacture our own chemicals.

*Mr. Ginwala.*—What I want to find out is whether you really save very much money by having a chemical plant. Probably you do. But from the figures you have given, I am not able to read them in such a way as to satisfy myself.

*Sir W. Carey.*—We should be very glad to go into them in detail with you.

*Mr. Ginwala.*—The principal thing, I think, is the causticising plant.

*Sir W. Carey.*—We have an electrolytic bleaching and caustic manufacturing plant.

*Mr. Ginwala.*—Do you really save on that? The other people do not have any chemical plant. The question that arises is whether it is a saving or only a convenience.

*Sir W. Carey.*—It is a real saving, chiefly in chloride of lime.

*Mr. Ginwala.*—From those figures I have not been able to see that it is so.

*Sir W. Carey.*—The chloride of lime is shipped, say, for eight months in a year and arrives here in a fairly decent condition, but it very quickly starts to deteriorate. During the hot weather, the steamship companies won't carry it and we have to stock enough to carry us through. Also during the rains deterioration takes place and the wastage is tremendous.

*Mr. Ginwala.*—You can say these are the chemicals that you manufacture. If you imported them it would cost you so much, wastage would be so much and something else would be so much. Here of course you have given your costs, but the items about wastage which would increase your costs are not given.

*Sir W. Carey.*—Sometimes when foreign bleach came to be used, instead of being 37 per cent. it was sometimes only 5 or 7 per cent.

*President.*—Do you use Liverpool salt?

*Sir W. Carey.*—Yes.

*Mr. Ginwala.*—How is it different in properties for your purposes?

*Sir W. Carey.*—We tried to buy Indian salt, and we made an arrangement with the Madras Government to give us the salt duty free, but we found we had to go so far beyond Cuttack down the Madras coast that it

was impossible to get salt at a competitive price. Then again, when we have bought the locally manufactured salt from the Madras Presidency, we have found the wastage up to 15 per cent. in dirt. We had to precipitate the dirt out of the salt before we could use it.

*Mr. Ginwala.*—Let me put it this way. It is a question of merely cost and not of quality?

*Sir W. Carey.*—It is a question of cost. We have tried it. We have done our best. At one time we had a scheme of making our own salt on the Cuttack coast, but we found that it would not work. As a matter of fact whenever other people put up salt works, they were killed by the imported salt.

*Mr. Ginwala.*—With regard to lime are you favourably situated?

*Sir W. Carey.*—Yes.

*Mr. Ginwala.*—Where do you get your lime from?

*Sir W. Carey.*—From various suppliers; from Sylhet and Kalyanpur.

*Mr. Ginwala.*—These are at some distance?

*Sir W. Carey.*—They are all at some distance.

*Mr. Ginwala.*—Do you use a considerable quantity of Indian clay?

*Sir W. Carey.*—Yes. I may say that we started using it during the war.

*Mr. Ginwala.* What is the difference in properties?

*Sir W. Carey.*—Chiefly colour.

*Mr. Ginwala.*—It loads the paper all right?

*Sir W. Carey.*—Yes.

*Mr. Ginwala.*—Does it affect the colour of the paper?

*Sir W. Carey.*—The clay has not got the same white colour when precipitated or when put into water.

*Mr. Ginwala.*—What effect has it on the paper?

*Sir W. Carey.*—It brings the colour back after it is bleached.

*Mr. Ginwala.*—But for *badami*, for instance, it would not matter?

*Sir W. Carey.*—For that we should probably continue to use it.

*Mr. Ginwala.*—For different kinds of coloured paper, you can use it but not for white printing?

*Sir W. Carey.*—In the case of coloured papers; clay does not come to anything.

*Mr. Ginwala.*—What is the reason?

*Sir W. Carey.*—It is not every paper that has clay in it.

*Mr. Ginwala.*—Then it is the average for all kinds of paper that you have given?

*Sir W. Carey.*—Yes.

*Mr. Ginwala.*—The average may be misleading?

*Sir W. Carey.*—We can give you in detail if you like.

### III. LABOUR.

*President.*—In answer to Question 42 you say that of the labour 40 per cent. is indigenous and 60 per cent. imported, very often from long distances. This is field labour. In which of your fields have you got to use imported labour most?

*Sir W. Carey.*—In the Western Circle.

*President.*—And in Nepal?

*Sir W. Carey.*—Not in Nepal. We have got Nepalese men to work these forests. Otherwise, we should not be able to get men. We are not allowed to go into the fields. They get men anyhow and they report they have as many as 15,000 men.

*President.*—In the Western Circle, it is another handicap?

*Sir W. Carey.*—Quite so. But there is of course a proportion of local labour.

*President.*—But it is scanty?

*Sir W. Carey.*—Yes.

*President.*—In answer to Question 46, you say "Since the factory was established a large number of trained men have been taught, father and son, and have become a recognised paper making labour force but still requiring expert technical supervision. It is anticipated that this will always be the case because the process of paper making is always undergoing improvements and alterations, and, therefore, there is need for men with European-trained modern technical knowledge." I take it that it does not in the least follow that these European-trained men would be Europeans?

*Sir W. Carey.*—No, it is only the knowledge.

*President.*—It is obvious that in any industry you must have men who are up-to-date.

*Sir W. Carey.*—Yes. As a matter of fact we have quite a number of men who had really learnt the trade, but they are not as a rule educated men.

*President.*—You say in your answer to the previous question that the Titaghar Mills employ about 20 expert supervisors of various kinds.

*Sir W. Carey.*—Yes.

*President.*—That is 10 for each mill?

*Sir W. Carey.*—About that.

*President.*—Can you tell us how the number of imported men you employ now compares with the number you employed, say, 10 or 20 years ago?

*Sir W. Carey.*—Considerably less.

*President.*—Is it less?

*Sir W. Carey.*—Yes, I should think 6 or 7 men less.

*President.* If you could give us figures for 1903, 1913 and 1923, it would be useful.

*Sir W. Carey.*—Yes. As a matter of fact I find I have the figure here and we have actually 16 men and not 20 men.

*President.*—Shall we correct that figure?

*Sir W. Carey.*—Yes.

*President.*—At the end of your reply to Question 46, you say "No apprentices have offered as yet on the technical side of papermaking in this country from among educated Indians." I think that you have also said that you have not got any regular system of apprenticeship.

*Sir W. Carey.*—We have a scheme but there was no enthusiasm on the part of educated Indians to take it up. I can tell you what we have. We have a number of men in superior billets at the mills who have been trained, but they are all uneducated men of the superior mistri type. We are able to leave a great deal to them in the way of mechanical work. They do very well. As I said, they bring their sons and teach them paper making. It has become a sort of regular caste and it is becoming a caste in India too. When the old mills at Balli were shut down, some men came and joined us at Titaghar. They had learnt the paper trade and stuck to paper. Those men are quite valuable, but they are all uneducated men, and the man who has not come forward as yet is the educated man. These men are all right up to a point but we still require educated men.

*President.*—It is obvious that, if the higher technical supervision is to be done by Indians, you must get educated Indians. At what age do you consider it necessary that they should enter the works?

*Sir W. Carey.*—As you know, what happens in English mills is that a boy goes in at the age of 14 or 15. He gains his practical experience there. He actually learns how the grass is to be boiled and so on.

*President.*—What arrangements are made for continuing his education, or does his education stop at that point?

*Sir W. Carey.*—He goes to a night school for his education.

*President.*—You don't regard it as desirable that his education should cease?

*Sir W. Carey.* No. Of course opportunities are given for technical training where they have special classes. The men who are for years in a mill and who do not wish to remain as machinememen or foremen, may rise to superior positions or become a chemist or something of that sort. The papermaking chemist is a special trade. We have already trained Indians as papermaking chemists. They are educated men and they are doing very well.

*President.*—They are men who had a general technical training?

*Sir W. Carey.*—They came simply as chemists.

*President.*—At what age did they come?

*Sir W. Carey.*—About 25. One of them is a little older. Whenever we had applications we always entertained them and the last one came from the Dacca University, but the man never turned up when we offered to take him on. At present, between the two mills, we have something like 50 men holding what you may call superior jobs, who have been trained at the mills and who have made it their life's work.

*President.*—What is the nature of the appointments held by the sixteen Europeans?

*Sir W. Carey.*—Supervising beaters, boilers, machine house and so forth.

*President.*—Take the boiler, for instance. Is there anything special about it?

*Sir W. Carey.*—Very much.

*President.*—Would that require a special knowledge of the paper trade?

*Sir W. Carey.*—Very much. You have to take your steam pressures. You can make or lose a tremendous lot of money. Then you have to watch your time of boiling. You can spoil a three ton boil. These are actually digester houses for treatment of grass.

*Mr. Ginwala.*—What is the total wage bill of these 16 experts?

*Sir W. Carey.*—It is Rs. 8,700 a month.

*Mr. Ginwala.*—Does it include allowances and everything?

*Sir W. Carey.*—Yes.

*Mr. Ginwala.*—Also passages and provident fund?

*Sir W. Carey.*—They are given free quarters. Apart from free quarters they get the same concessions as other men. Everybody gets free medical attendance, and so on.

*President.*—Does that include everybody right up to the Manager?

*Sir W. Carey.*—It includes the Manager and Assistant Manager.

*Mr. Ginwala.* You have had these men all the time?

*Sir W. Carey.*—We had many more at times. This is our present staff. I think that it is probably down at least by 6 or 7.

*Mr. Ginwala.*—That is not much of a reduction in so many years.

*Sir W. Carey.*—It is very considerable when you look at the work they have got to do.

*Mr. Ginwala.*—Let us suppose that you had started in 1905. It is nearly 20 years. Even then you cannot say that you have Indianised in the same proportion as Indians want the higher Public Services to be Indianised.

*Sir W. Carey.*—You have got something like 50 men in the two mills who, 20 or 25 years ago, knew nothing, absolutely nothing. If you take this staff and that staff, it is something like 75 per cent. in the last 20 years. These men here 25 years ago knew absolutely nothing. They were raw coolies.

*Mr. Ginwala.*—That may be so. People get more knowledge as they get older. If you have reduced the European experts by 4 in the course of 20 years, I say that that is not keeping pace with the Indianisation in the higher Public Services.

*Sir W. Carey.*—That is not our fault. It is the fault of the people who have not come in. We are out to buy brains every time.

*Mr. Ginwala.*—It depends very much where you look for the brains.

*Sir W. Carey.*—We are out to buy the best brains.

*Mr. Ginwala.*—This question has assumed some importance nowadays. Your explanation is that you don't get the proper kind of Indians.

*Sir W. Carey.*—They have not come forward.

*Mr. Ginwala.*—It is the same thing as your not getting them.

*Sir W. Carey.*—I don't follow.

*Mr. Ginwala.*—You say that Indians are not easily available.

*Sir W. Carey.*—I don't think so far the paper industry is one which has attracted the educated Indian. He has not shown any eagerness to go to the mill and learn the trade as the man at Home does.

*Mr. Ginwala.*—Surely you don't mean to say that it is less attractive than the steel industry for the Indian?

*Sir W. Carey.*—Perhaps, it looks like it.

*Mr. Ginwala.*—Why should you think so? The conditions in the paper industry are not so arduous.

*Sir W. Carey.*—People would not work 12 hours a day in the steel industry.

*Mr. Ginwala.*—There is no 12 hours a day now. So far as hours and other things go, it is the same in the steel industry as in any other industry. In the steel industry, in some Departments, there are only Indians. If the steel manufacturers don't find it difficult to get Indians why should you find it so?

*Sir W. Carey.*—We should be very pleased if you would send us the educated men.

*Mr. Ginwala.*—We have received a complaint from one Mr. Gopal. He has not been able to get into any of the paper mills. We do not actually know what his qualifications are, but he certainly got an answer from practically all the mills. It amounted to this that he was not required. He applied to the Bengal Paper Mills and then to the Titaghur Mills. He also wrote to Meeunakshi Paper Mills, Travancore. Then he wrote to the Director of the Central Bureau of Information, Home Department, Government of India, and to the Department of Industries, Government of India. He also wrote to the Director of Industries of Madras.

*Sir W. Carey.*—This is only the present generation. I think that we must have trained 20 or 30 men.

*Mr. Ginwala.*—He is apparently a better class Indian.

*President.*—We do not know whether this man was suitable.

*Sir W. Carey.*—Yes. Personally, as I said, I should recommend that any educated Indian who wished to learn papermaking, apart from the technical side, should be willing to go and learn papermaking from the start at the mills as it is done in other countries.

*Mr. Ginwala.*—You say that in England a boy of 14 or 15 goes into the mill. You cannot say that he is a very highly educated man.

*Sir W. Carey.*—He is not.

*Mr. Ginwala.*—Then why do you insist upon having an educated Indian?

*Sir W. Carey.*—Every one knows that we have made the best of what we have got.

*Mr. Ginwala.*—You cannot have it both ways. You cannot have a very young man and at the same time have a very educated man.

*Sir W. Carey.*—It is no use having a man at 24 and expecting him to learn papermaking unless he is prepared to stay for a number of years at the mills. He will never learn papermaking in any other way. For instance, a boy of 13 started his work at a papermill. He learnt for seven years, practically, until he was 21. He then took two or three years training at a technical school and learnt the higher side of papermaking. He then became an Assistant Manager and learnt the higher side of management. By the time he was 35, he was ready to take up a big job.

*Mr. Ginwala.*—I will say this much: that in the light of what you say, so far as India is concerned, there is no chance of an Indian learning this trade. If a boy goes to you at 14 or 15, you will say that he is not educated enough. If he goes to you at 25, you will say that he is too old.

*Sir W. Carey.*—May I explain? There are lots of men in the English paper mills who go in at about 14 or 15. They never become anything else but foremen, as the men out here, in charge of various sections of the mill. That is all. They never become superior men at all. There is no reason why that boy should not come in at an early age and learn practical experience and get the technical training either here or in Europe. We should only be too pleased.

*President.*—Have you ever discussed this question with the educational people in Bengal?

*Sir W. Carey.*—The other day I had an application from the Dacca University to take in a young fellow who had just finished his technical side, but that had nothing to do with paper. We gave him an opportunity. We do not know what happened to him. He first came up to Calcutta and he got ill before he joined us and since then he seems to have disappeared. There was an opportunity which we offered. I am quite prepared to do the same to-day but, as I say, to be really a first class paper manufacturer, to be able to take charge of a mill as a mill Manager, a man must learn practically first and then take his technical training.

*Mr. Ginwala.*—What is there in this industry which requires so much preliminary knowledge and so long a training?

*Sir W. Carey.*—Either he is a Papermaker or he is not.

*Mr. Ginwala.*—What is there in the industry that makes it so? What is the personal experience intended to teach that man. Take the open-hearth practice in steel-making. There we are told that it does not matter how much theoretical knowledge you have, the eye has got to be trained. You have got to see at a temperature of 2,000° as to what is happening inside the furnace. That we can understand. What is there in your business corresponding to this which cannot be learnt without very long training and experience?

*Sir W. Carey.*—There it is the eye and here it is the feel. I cannot do it but I have seen men doing it. You have got to put your hand in that pulp and know what you are making. It is just like cooking and it has got to be learnt. Believe me, it is not that we hold back in any way. It is simply this, that the men whom you seem to be speaking about have not come forward in any number to be trained.

*Mr. Ginwala.*—If an Indian is always told that he cannot learn this except from father to son, except by being educated and beginning at 15, by attending 12 hours a day and for 15 years, he is not likely to come in.

*Sir W. Carey.*—How otherwise do you suggest that we should make it easy for him?

*Mr. Ginwala.*—I do not see why you should not be able to get more Indians.

*Sir W. Carey.*—Suppose we take the University trained man at the age of 22 or 23 and put him on to the mill to learn the job. I very much doubt if he will be willing to do the work that these men do—I mean the work of superior mistris, but they have got to go through that: If they wish



to become managers of paper mills, they have got to do it. If you get a nice typo of youngster I think it is very likely that he would do that.

*Mr. Ginwala.*—That is the thing that an Indian is told in practically everything. We hear that in connection with the Army, we hear the same thing about the Civil Service and in everything else. It is very hard to believe that this difficulty is insuperable.

*Sir W. Carey.*—If you can suggest any way round?

*Mr. Ginwala.*—As an Indian I am telling you the case of an Indian.

*Sir W. Carey.*—I shall be glad to do what we can. There are two alternatives: give him his practical training and then give him technical training. Then I think, as you suggest, there is a chance of making him a first class paper maker if he is an intelligent man. There is the alternative. Take the University trained man. I do not think you can make him anything more than a technical paper maker. I do not think he will ever be able to manage a paper mill. I cannot describe the distinction any better. We have Europeans in our own mill. One of them is a paper maker; another man is not a paper maker.

*Mr. Kale.*—You gave certain figures of the Indians employed in the superior service. I want to know how many Indians there are of the same status, of the same calibre and capacity as the 16 Europeans, because the men you mentioned were drawn from the sons of workmen. I want to know whether the 16 Europeans are the only men of that status. How many Indians are there occupying the same status as Europeans?

*Sir W. Carey.*—You mean in respect of pay?

*Mr. Kale.*—Pay and also the kind of work they do.

*Sir W. Carey.*—Actually none.

*Mr. Kale.*—That is an important point. You tell us there are so many Indians, but practically there are no Indians of that status.

*Sir W. Carey.*—These are all foremen; the Europeans are all supervisors brought out to supervise these workmen.

*Mr. Kale.*—I wanted to know how many supervisors there are among Indians.

*Sir W. Carey.*—You may call them supervisors but they are foremen. As a matter of fact there are electrical plant foremen. There are six foremen at the digester house, four foremen at the breather house and 10 foremen in the machine house. These are on double shifts.

*Mr. Kale.*—But the Indians have not risen above the position of foreman. That is my point. As Mr. Ginwala put it, after 25 years you have not been able to train men for the work of supervisors.

*Sir W. Carey.*—These are drawn from Home mills for a short period and sent Home again.

*Mr. Kale.*—You cannot afford to continue like that. You must ultimately have Indians to do it, and you should have made at least some progress.

*Sir W. Carey.*—We have made considerable progress; we have got 50 men.

*Mr. Kale.*—That is a different point entirely.

*Sir W. Carey.*—We have got one man on Rs. 250, Assistant Engineer on Rs. 290, a man in the power house on Rs. 260, and one Chemist. We have replaced four Europeans by Indians.

*Mr. Kale.*—All that one can say is that you have just made a beginning.

*Sir W. Carey.*—Some of these have been employed for some time—for the last four or five years.

*Mr. Kale.*—You referred to glass blowing as an instance and said that special aptitude and special qualifications were necessary for that. Perhaps you are aware there are certain glass works here in India which are entirely run by Indians. I know particular glass works which are entirely run by

Indians, and there they find no difficulty, and these glass blowers were not born to the trade. They picked it up.

*Sir W. Carey.*—Perhaps it is a little bit easier than paper making. I do not know.

*Mr. Kale.*—As you gave that illustration I had to tell you that in glass blowing Indians have been trained without difficulty. Suppose an educated man comes to your mills and wants to get apprenticed and is prepared to be bound to work for a given period. What facilities are you prepared to give him? You say there are no Indians coming forward. I know how anxious they are to enter into factories, and I know also what difficulty they have to encounter in getting into a factory.

*Sir W. Carey.*—Could you tell me what sort of facilities they would expect?

*Mr. Kale.*—They would expect during the period of apprenticeship some salary, to begin with.

*Sir W. Carey.*—Yes.

*Mr. Kale.*—Unless you are prepared to pay them something it is impossible for them to get into it.

*Sir W. Carey.*—What sort of salary do you expect them to get? There are apprentices in other industries. We can give anything to start with from Rs. 35 to Rs. 50 a month.

*Mr. Kale.*—They would like to know naturally what is the wage, what you would give them and what position they would be called upon to occupy after they have finished their apprenticeship.

*Sir W. Carey.*—One point would be that of quarters. Of course in mills 15 to 25 miles distant from Calcutta it would be very difficult.

*Mr. Kale.*—You will have to supply them with quarters.

*Sir W. Carey.*—Educated men, what else will they require?

*Mr. Kale.*—From what I know of the ambition of students I think I can guarantee to supply you students provided you can give them reasonable facilities in the way of training. Immediately they come into the works they cannot begin to earn?

*Sir W. Carey.*—That is of course one of the difficulties.

*Mr. Kale.*—There is a feeling that there is a sort of a prejudice against educated Indians in the minds of employers, whether European or Indian, and they do little for training apprentices. A few years ago an enquiry was made into this question and in the report we find that employer after employer complained against apprenticeship of educated Indians. On behalf of educated Indians I must say that this prejudice is to some extent at least ill-founded. At the present moment in any case these young men are quite willing to go into industrial works.

*Sir W. Carey.*—It very much depends, I think, on the attitude of the man himself. If he is willing to go in and work and not to be so very particular about this, that and other things, men of that type should have no difficulty now-a-days to get on quite well, because managers of mills and others understand the position very well and are always willing to help.

*Mr. Kale.*—It is necessary also that these young men should know in one way or another that, provided they are prepared to undergo a course of apprenticeship, they will have the doors open in factories. These young men do not know and consequently they do not approach you. The right type of Indian does not come because he does not expect facilities. So something will have to be done to let them know that opportunities will be given to them provided they come prepared to undergo the training. Do you think it is not necessary to do something of that kind?

*Sir W. Carey.*—We have come to the alternatives put by Mr. Ginwala whether we should take up youngsters or take educated men.

*Mr. Kale.*—There are two classes of people who will come to you. The first class will be those who do not come from families which are educated. It is from this class that you may get boys of 14 or 15 and they won't rise higher than your foremen; and the other type you will get from middle class families who will come with education, technical education or scientific education, whatever you want as the qualification necessary for your work, and they will be people of the right type for being trained to occupy higher positions.

*Sir W. Carey.*—Exactly in the same way as they have done in the coal fields. I do not see any reason why this should not be done.

*Mr. Kale.*—When certain students go out to foreign countries to learn paper manufacture the difficulty before them is that, unless they have had some experience of paper making in India, there is no use going to foreign countries, and that is the sort of difficulty in their way, so that when they return they find there is no opening for them.

*Sir W. Carey.*—Is there any suggestion you can make? Supposing we take a man and train him enough for two or three years to enable him to go to such a technical college abroad or to the mills anywhere, Japan, America, Sweden, Germany and so on—there are lots of countries where you can get practical training—is there any reasonable hope that he would come back to the mill where he first got his training in India?

*Mr. Kale.*—I think you can bind him.

*Sir W. Carey.*—Naturally one would be desirous. I am not speaking from the point of view of the present Indian mills. It is ordinary business. Unless one is going to get some benefit, a manufacturer will think twice before he takes him.

*Mr. Ginwala.*—It is done by Government in some departments.

*President.*—Government in the long run will benefit whether the officer eventually enters Government service or not. But Titaghur and the other mills are not in the same position as Government.

*Mr. Kale.*—Some Indian States have done it.

*Mr. Ginwala.*—It can be done legally. A man may be quite shameless and he may not care two pence for agreements, but ordinarily the educated man feels himself bound by them.

*Mr. Kale.*—Some States in India have done it. They have given scholarships and they make it a condition that on return the students must serve the State for five years.

*Sir W. Carey.*—That would remove a great difficulty from the business point of view.

*Mr. Kale.*—Then in answer to Question 51 you say "Generally speaking it takes from 2 to 3 men to do the work of one man in Europe" Can you give us a comparison of the wages?

*Sir W. Carey.*—Three men at Home, total wages—Rs. 840-0-0 a month, to do the work of 11 men here doing the same work at a cost of Rs. 1,000.

*Mr. Ginwala.*—The difference is Rs. 160 a month only.

*Sir W. Carey.*—That is at full working. At one time two men ran the machine and it takes five men now and there is double shift. That is taking the average wages of to-day—for the month of June—in our mills.

*Mr. Ginwala.*—Are these 11 all Indians or Europeans?

*Sir W. Carey.*—There is the necessary proportion of Europeans.

*Mr. Ginwala.*—How many Indians are equal to how many Europeans?

*Sir W. Carey.*—One Englishman supervises two machines: the rest is all Indian wages.

*Mr. Ginwala.*—Take half a European: how much does he get?

*Sir W. Carey.*—Rs. 300 a month.

*Mr. Ginwala.*—So that it is the difference in the European wages that actually make the difference in the cost of labour?

*Mr. Kale.*—So that the efficiency of Indian labour is not lower than that of English labour from the point of view of cost?

*Sir W. Carey.*—The difficulty is that they are not regular in attendance.

*Mr. Kale.*—If they do not attend they get no wages.

*Sir W. Carey.*—Regularity of attendance is one of the main things that we have to keep in view. Even among these men, if a European suffers from an accident and goes to the hospital, his particular machine does not run in the same way as when he is looking after it.

*Mr. Kale.*—I was just roading about wages in paper mills in America. There I found the average monthly wage is about Rs. 300 a month while in your factory it is Rs. 300 a year so that that means a ratio of 1 to 12 between the two. The American wage is \$25 to \$28 a week for men and \$16 for women. That works out to Rs. 300 a month and your average cost is Rs. 300 a year. If you take skilled labour alone the ratio will be 5 to 1.

*Sir W. Carey.*—Do you mean to say one American in your opinion is equivalent to 5 Indians and *vice versa*? I should not like to say so. Of course wages in America are very high in a certain sense.

*President.*—It is common knowledge that in America factories are organized so as to get the maximum output per man. It is not so much a question of efficiency in the ordinary sense, but of the effectiveness of labour.

*Mr. Kale.*—Has the efficiency of the machinery anything to do with it? Is the mechanical efficiency of Europe better than yours?

*Sir W. Carey.*—I think it is high in Europe, because they have their own machine shops suited to the trade. Here we have got to get it done in some workshop who does not know the work as well.

*Mr. Kale.*—That explains to some extent why the European labour is able to produce more?

*Sir W. Carey.*—Yes.

*Mr. Kale.*—If you place inefficient machinery in the hands of the Indian workmen, his productive capacity is bound to be lower so that the superiority of machinery may have something to do with it?

*Sir W. Carey.*—As far as that goes the Indian mills have done their very best to bring their machinery up to a point where the Indian workman has every opportunity. In fact we have brought our machines to a point where we can dispense with a large number of labour giving more opportunity to those who are left.

#### IV.—POWER (INCLUDING FUEL).

*President.*—In answer to Question 53 you say that your cost per unit of power is 6 pies?

*Sir W. Carey.*—The paper mill load is a very good load: it works 24 hours.

*President.*—In answer to Question 56 you say "The total quantity of fuel per unit of paper is 5.6 per ton of finished paper, including manufacture of chemicals, soda recovery, filtration and pulp-making." Is that what you actually worked to during the last year?

*Sir W. Carey.*—Yos.

*President.*—How does it compare with the practice in Western countries? Would that be regarded as high figure?

*Sir W. Carey.*—Of course, as I say, this includes the manufacture of chemicals, soda recovery, filtration and pulp-making. The English mills certainly do not have pulp-making and a great number of them have not got filtration or to manufacture their own chemicals. But making allow-

ance for that I should say it is a reasonable figure, also bearing in mind the fact that Indian coal is 10 to 15 per cent. less in calorific value than English coal.

*President.*—Have you made any calculations as to the amount of coal required for the manufacture of chemicals? If it were eliminated, to what extent would it reduce the quantity of coal per unit of paper?

*Sir W. Carey.*—No, because we stopped getting out these figures owing to the reconstruction of the plant.

*President.*—What I was thinking of was that it is necessary to eliminate that in order to compare with the other paper mills in India.

*Sir W. Carey.*—Yes.

*President.*—The Bengal Paper Mills, I think, gave us a figure of 6½ tons of coal per ton of paper.

*Sir W. Carey.*—Taken by itself one mill should require 6½ tons. That includes pulp-making.

*President.*—Then I think you said something this morning to what extent electric power can be substituted for fuel in the manufacture of paper. Is it possible to put any figure on that. When you give us a figure of a little more than 2 tons that would be required per ton of pulp, do you mean that you will require that amount of coal if you were making full use of hydro-electric power?

*Sir W. Carey.*—Hydro-electric power would not be used for boiling and drying.

*President.*—In the subsequent processes how far?

*Sir W. Carey.*—All the other processes are electrically driven.

*President.*—To make a ton of pulp you require 2 tons of coal or its equivalent in some other fuel and this cannot be replaced by hydro-electric power?

*Sir W. Carey.*—That is so.

*President.*—For the remainder of the process of making paper to what extent can you use electric power and to what extent must you have fuel?

*Sir W. Carey.* I think with the exception of sizing we can use electric power for everything else. I may say 2½ tons as against 4½ tons.

*Mr. Ginwala.*—What we were told was that, so far as paper making was concerned, electric power was not as economical as steam power: is there something in that?

*Sir W. Carey.*—I should not say so.

*Mr. Ginwala.*—And they said that therefore it would not be economical to substitute electric power for steam in paper making.

*Sir W. Carey.*—I have never seen any real cause to regret electrifying our No. 1 Mill. The whole of the Titaghur Mill is electrically driven.

*Mr. Ginwala.*—Except for drying, I take it?

*Sir W. Carey.*—Except for boiling and drying.

*Mr. Ginwala.*—For that you have to use steam?

*Sir W. Carey.*—Yes.

*Mr. Ginwala.* But the other witnesses said that you could not altogether dispense with steam power for driving purposes. Your experience shows that you have not found any difficulty so far?

*Sir W. Carey.*—I think we would be safe in saying that we do not anticipate any difficulty.

*Mr. Ginwala.*—That is an important thing. If a paper mill was to be started in a place where coal was not available in large quantities but where electricity was available - - -

*Sir W. Carey.*—I think modern paper mill practice has been brought to a pitch where we need never have any fear whatever.

*Mr. Ginwala.*—Take the pulp part. There you said you would require about 2 tons of coal. Is there any possibility of eliminating that? Can you boil your mixture electrically?

*Sir W. Carey.*—That I have heard of, but it is very expensive.

*Mr. Ginwala.*—Take the case of Malabar, or take even Burma or the Arakan where the difficulty of obtaining coal fuel is great. The question arises whether the very good raw materials they possess can be utilized by the creation of hydro-electric power.

*Sir W. Carey.*—If you have a decent water fall for generating hydro-electricity you need not use fuel. This is done all over Sweden.

*President.*—You mean the whole process is done by electricity?

*Sir W. Carey.*—No, they have coal or fire wood.

*Mr. Ginwala.*—Do you know whether for boiling purposes they can use electricity?

*Sir W. Carey.*—I am sorry I cannot tell but the firm of Bovings Limited, will tell you. They are Swedish people and they have an Office in Calcutta. I have heard that it can be done, but it is expensive.

*Mr. Ginwala.*—You use pretty nearly the best quality of coal?

*Sir W. Carey.*—Not now. In Kankinara we have Lancashire boilers where we have to use good coal. In the other mill we have up-to-date steam boilers plant where we can use anything.

*Mr. Ginwala.*—How does it work out on average?

*Sir W. Carey.*—Rs. 10 to 14 a ton.

*Mr. Ginwala.*—That does not give us an idea as to the average.

*Sir W. Carey.*—You can say that for the current year it is lower still.

*Mr. Ginwala.*—You mean in one place it is 10 and in the other 14?

*Sir W. Carey.*—Yes. You can take it on an average as Rs. 12 between the two mills.

### Continued on the 24th July.

#### V.—MARKET.

*President.*—In answer to Question 63 you say "The market for the Indian mills is the whole of India, almost without exception, including Burma." Well, what would be useful for us to know, I think, is the quantity of your paper that you sell in the various markets, at any rate for each place where you sell, as much as 5 per cent. of your output.

*Sir W. Carey.*—We have it in this way—

Approximate sales in different markets:—		per cent.
Dalhi and the Panjab	.	10
Calcutta	.	23
Bombay	.	6
South India	.	5
Burma	.	5
United Provinces	.	2
General mofussil	.	11
Government & Railways (including Provincial Governments)	.	38

*President.*—Is that for one year or is that an average?

*Sir W. Carey.*—That is the average over a certain number of years.

*President.*—As regards the prices at which you sell up-country, are they practically the same as in other parts or do you realize a higher price?

*Sir W. Carey.*—I think we may say that they are more or less the same.

*President.*—That is unusual. Take the other important industries that we are investigating e.g., cement. The price of cement is by no means the same up-country as in the ports. The price varies according to the distance from the place of manufacture.

*Sir W. Carey.*—In paper freight is to some extent, or rather to a much less extent, a consideration because of its comparatively small bulk. With a bulky trade you have to take that into consideration.

*President.*—You have given us some freights later on that may amount to as much as half an anna per pound. If the price of paper is not higher up-country than it is in Calcutta, it means that what you actually receive for your paper may be as much as half an anna less per pound.

*Sir W. Carey.*—That is so. That is by reason of the competition from ports of imported paper.

*President.*—You don't have this phenomenon in other industries where there is similar competition.

*Sir W. Carey.*—That is one of the reasons why we desire, as far as possible, to exclude these foreign papers. They are prepared to sell at rates up-country at which we are compelled to compete.

*President.*—I am afraid I don't see why, if they can afford to accept a certain sum up-country, why they cannot accept an even smaller sum at the ports?

*Sir W. Carey.*—I don't quite know how far it still exists, but that was one of the many points before the war that the German paper people made a very strong set at. Their commercial intelligence collected the rates all over India, and they so arranged that the exporter of the paper from the 'Continent' should give him assistance, and I take it that he was able to put down at level rates at all up-country markets. I don't know if that still continues but the fact is there.

*President.*—That is hardly the point. The point is why are you selling at the same price up-country?

*Sir W. Carey.*—Of course our motive is to get orders.

*President.*—It is very peculiar that it should happen in this one trade; I have never heard of it in any other trade. Let me take concrete figures. If the price is 4 annas a pound to the consumer both in Delhi and in Bombay, what it means is that the manufacture in Europe is receiving for the paper he sells in Bombay 4 annas less sea freight. For what he sells in Delhi he is receiving only 3 annas 8 pies less sea freight. If he is content to accept 3 annas 8 pies in Delhi, why is he not content to get that in Bombay?

*Mr. Bellamy.*—It is not the consumer who is receiving the paper in Delhi but the wholesale importer who imports the paper from Bombay, or Karachi in the case of Lahore. The cost is 3 annas 8 pies per pound at port, and then he has to pay his freight at 4 pies per pound, so that he gets it at 4 annas a pound whereas the man in Bombay or Karachi gets the same paper at 3 annas 8 pies per pound.

*President.*—Then the prices are not the same up-country as they are at the ports?

*Mr. Bellamy.*—They are not the same for foreign paper, but they can buy more easily at lower rates from the continental supplier than they can from us.

*President.*—I gather that the freight from the ports to up-country stations is not passed on to the consumer—meaning by consumer the person who buys from you.

*Mr. Bellamy.*—As regards Delhi and Lahore markets there is a difference in price between the prices prevailing in these markets and the Bombay and Karachi markets, the difference in price representing the actual railway freight.

*President.*—Don't you get the benefit of that difference?

*Mr. Bellamy.*—No, because if we got the benefit of that difference on the price we must charge in Calcutta, it would mean that our price in Delhi and Lahore would have to go up still further. We are now charging against 4 annas a pound 4 annas 4 pies or 4 annas 3 pies. Therefore we should have to add our railway freight again which would bring that figure to 4 annas 6 pies making the price impossible to sell at.

*President.*—That must imply that the price that you are getting up-country is the normal price, then by some means you must be able to get a better price in Calcutta or Bombay.

*Mr. Bellamy.*—In Bombay we sell only 6 per cent. We get a very much lower price in Bombay than we do in Calcutta. In places like Madras and Bombay we have to sell at very much lower prices which mean a loss to us, but which we have to sell at in order to dispose of the unsold output in face of the low rates of foreign paper at those ports and our distance from them.

*President.*—In your own market, so to speak—in Calcutta, where you have been dealing with people for a number of years, one can understand that you might be able to get a more favourable price. What I am trying to get at is that I should have imagined that the price you would receive in Delhi should be higher than the price you would have got in Bombay.

*Mr. Bellamy.*—Naturally it is so as regards Bombay but not in Calcutta.

*President.*—Then it is not a fact that the prices are the same in all parts of India? I am putting the question because the Bengal Paper Mills people definitely said that it was.

*Mr. Bellamy.*—It may be true as far as the Bengal Paper Mills are concerned. Their output is a small one and I think they confine their sales more or less to Calcutta and up-country markets as far as Delhi. They do not look for a market in cheap centres like Bombay and Madras as we do; Our prices must come down in those markets.

*Mr. Ginwala.*—In Bombay I take it you get something like the import price or something below it?

*Mr. Bellamy.*—We get about the import price. We have had no advantage at Bombay. We cannot afford to sell below. Our price is invariably higher by a shade.

*Mr. Ginwala.*—Is not that rather a defect in the market?

*Mr. Bellamy.*—As a matter of fact, we always cover ourselves in selling in Bombay. We will not sell in Bombay at a greater difference in price than the Delhi price less the Railway freight, so that paper sold in Bombay cannot come back and compete with us in Delhi.

*Mr. Ginwala.*—You are not getting the same price. You are getting a higher price. We are arguing in a circle.

*Mr. Bellamy.*—We get one price for the whole of North India with the exception of Bombay, but including Calcutta.

*Mr. Ginwala.*—I know that there are some trading Corporations who stipulate 'you shall not get our product if you are going to send it beyond a certain place.' According to your own estimate you are able to do it. But you can only do it by charging a price which would make it unremunerative for them to send your goods beyond the ports. But then in that case you won't get a market in Bombay. You will be selling at a considerably higher price than the import price.

*Sir W. Carey.*—The market is very much smaller for us than we should like it to be. We are at the present time taking all possible steps in each of these markets with a special staff to see what we can do to improve the situation.

*Mr. Ginwala.*—What I cannot see is: why should you not give the benefit of that reduction in price to your consumer in the interior rather than to the Bombay man? You are not developing your market in the interior as you might be doing. You sell at a great sacrifice in Bombay. Supposing, instead of sacrificing in Bombay, you give the



benefit of that to your customer in the interior, Delhi or Lahore, or any other place, you stand a good chance of getting a better market.

*Sir W. Carey.*—No, we would not get any increase there. The size of the market up-country would not allow of the expansion. It is in the Ports where we lose the business.

*Mr. Ginwala.*—You will be able to cheapen it and cheapness must tell in the long run.

*President.*—I think that your meaning is this, is it not, that the reduction that you would be able to effect in the price in the up-country markets by abandoning your Bombay sales which amount to 6 per cent. of your output would be so small that it would not appreciably affect your sales in the up-country markets?

*Sir W. Carey.*—Yes. That is so.

*Mr. Ginwala.*—Take the case of Burma. Why do you want to go to such far off markets? Instead of sacrificing your goods at those distant markets, you may develop your own market which is much nearer your factory.

*Sir W. Carey.*—I can only submit that we have a special sales organisation in Delhi, in the Punjab for three years, and with the whole sales organisation that we have at the ports as well we are not able to do much by reason of competition from abroad. That is actually the fact. It is not that we overlook these markets. We are taking special measures in each market at the present time to improve our sales.

*Mr. Ginwala.*—What seems to me is that you are trying to keep the easier market even at a sacrifice.

*Sir W. Carey.*—I am afraid I cannot allow that because we are now specially studying each market right throughout the country particularly with the special staff, and on the information we are receiving weekly from each market we have to fix the best we can. Even so we are working at 1,250 tons a month as against a possible 1,500—1,600 tons a month.

*President.*—You mention that you have a certain advantage in freight rates up-country as compared with the importer, but is there anything in the railway rates which would prevent the importer from getting the same concession under the same conditions?

*Mr. Bellamy.*—Yes, these concessions apply only to paper despatched from the stations where our mills are situated. For instance, if we despatch our paper from Calcutta, that is Howrah, we should have to pay the same rate as the importer, but if we despatch from Titaghur or Kankinara we get these concessions.

*President.*—It is only from stations beside your own mills?

*Mr. Bellamy.*—Yes, and stations beside other mills.

*President.*—Is this an arrangement which has been going on for a long time?

*Sir W. Carey.*—No, it is only a recent arrangement.

*President.*—Then you say "These concessions are also not general but only to a few large up-country stations." I take it that in practice it does not make much difference. To smaller stations you really have to send smaller consignments.

*Sir W. Carey.*—As a matter of fact small consignments have no concessions at all.

*President.*—But still you get the benefit of these concessions to the extent of about 75 per cent. of your up-country sales.

*Mr. Bellamy.*—That is right.

## VI.—FOREIGN COMPETITION.

*President.*—Then, you have given us the rates to various places up-country in answer to Question 82. Of course when the imported paper reaches the destination by a different route, it is a different issue. You are answering the question from a rather different point of view. It is really Titaghur to Delhi and Titaghur to Lahore. You have a substantial advantage as far as

Delhi is concerned over the importer, whereas in the matter of freight to Allahabad, the advantage you have over the importer is only '02 pic.

*Mr. Bellamy.*—The difference which we have to meet in price is approximately 4 pies per lb.

*President.*—I am not saying that it amounts to anything very much. It is appreciable to Delhi but as to Allahabad it is very small indeed.

*Mr. Bellamy.*—That is so.

*President.*—In answer to Question 72, you say that imported wood pulp will be required always for the manufacture of certain qualities of paper, and that bamboo might under certain conditions in time replace this to some extent. What we were told by the Indian Paper Pulp Co. people was that, putting aside the question of mechanical wood pulp, bamboo pulp would replace imported wood pulp for all purposes.

*Sir W. Carey.*—Yes, some papermakers do agree.

*President.*—That is not your view?

*Sir W. Carey.*—We have had varying opinions on that subject. I believe that it is quite possible.

*President.*—Have you a definite view on that point or not?

*Sir W. Carey.*—We should be prepared to use bamboo pulp ourselves.

*President.*—This answer as it stands in the paper is hardly consistent with what you eventually say in supporting a proposal for a duty on imported pulp.

*Sir W. Carey.*—There has been a difference of opinion, as there must be on any comparatively new thing, between papermakers. We ourselves on the best advice that we have received up-to-date would be prepared to use bamboo pulp in place of wood pulp.

*President.*—Have you actually experimented with it in the sense of saying whether it would do the work of wood pulp?

*Sir W. Carey.*—We have used many hundred tons of bamboo pulp ourselves.

*President.*—Could you use it for all the various purposes for which you would use wood pulp?

*Sir W. Carey.*—For most of them.

*President.*—Those experiments form the basis of your view?

*Sir W. Carey.*—It can be utilised in place of wood pulp.

*President.*—But is it equally good?

*Sir W. Carey.*—With equal confidence it can be used.

*Mr. Ginwala.*—As regards your answer to Question 67, there is rather a difficult question involved in this. It is obvious that the Indian newspapers—the bigger ones at any rate—cannot afford to buy your paper; nor can your paper be used for the ordinary kind of cheap things like hand bills that nobody cares to preserve, and things like that. They are made chiefly out of mechanical wood pulp, and the Indian consumer as you know cannot afford to pay beyond a certain point. If we were to exclude newsprint from our recommendations, do you think the chances are that some of this paper might be used for other purposes?

*Sir W. Carey.*—Yes.

*Mr. Ginwala.*—But if we did not exclude newsprint, you would raise simply the price of an article without your really getting any benefit out of it.

*Sir W. Carey.*—With regard to the newspapers which import mechanical pulp paper for their printing, their consumption is fairly well known. Would there be any difficulty in giving them special licenses to import their requirements of mechanical wood paper?

*Mr. Ginwala.*—I do not know. I want you to tell us.

*Sir W. Carey.*—We are of opinion that there would be no difficulty.

*Mr. Ginwala.*—What about the small newspapers which live from hand to mouth? The small consumer gets the quantity that he requires from the bazar.

*President.*—I should like to have your opinion on this point. It is not only a case of direct importers. It is also a case of smaller newspapers which buy from a merchant who is importing mechanical wood pulp paper. It might not be impossible to devise a system of licenses for papers like "The Times of India" or "The Statesman." It is a manageable proposition. But you cannot extend that to people who are selling to the smaller consumers, for there would be no safeguard against abuses at all. If you say "very well, we will give the license only to direct importers," you will be benefiting the large and prosperous papers but doing nothing for the struggling newspapers.

*Sir W. Carey.*—I think that about 50 per cent. of the small newspapers already buy our paper because they get it from hand to mouth. They get the same credit from us as they get from the importer. There is of course the balance of 50 per cent. which would be a matter for the Customs authorities to devise some scheme, but these already pay a considerably higher price to the importers for their small quantities.

*President.*—I should say definitely that an elaborate scheme extending over a large number of newspapers is not workable. I don't think that it would work.

*Mr. Ginwala.*—Would it not be better—I am just putting to you a mere hypothetical question—for the time being, supposing protection was given to paper, to ignore the mechanical wood paper and newsprint and watch the results?

*Sir W. Carey.*—I don't think that we could. The bazar will be filled with cheap paper. Probably we should be worse off than we are to-day. The bazar would then use the cheap paper more so than it does now.

*President.*—What is the difference in price between the newsprint made from mechanical pulp and the commoner paper made by Indian mills?

*Mr. Bellamy.*—The newsprint comes at £17 a ton which is just over two annas a pound c.i.f. (without duty, etc.) and we sell at about 4 annas.

*President.*—If the difference in price to-day is 100 per cent., protection would only mean an increase of another 6 or 7 per cent., which would not increase the danger very much. If your stout-hearted customers in the bazar are willing to pay 100 per cent. more to you, I should think that they would stick to you in spite of the increase of another 6 or 7 per cent.

*Sir W. Carey.*—We should think it very dangerous to see mechanical wood paper allowed in free. The difference is not 100 per cent. when the bazar importer sells to the small consumer. It is considerably less.

*President.*—It is not a question of getting in free. It will still be subject to the 15 per cent. duty. I can only put it that if the difference in price is at present 100 per cent., it does not seem to me that the danger would be very great.

*Sir W. Carey.*—The difference is really much less than 100 per cent. and we hope to be able to reduce our price considerably with protection.

*Mr. Ginwala.*—I think that you should not be unduly apprehensive of the substitution. After all, mechanical wood paper cannot be used for many newspaper purposes in India.

*Sir W. Carey.*—That remains to be seen.

*Mr. Ginwala.*—You cannot wrap a pair of boots in mechanical wood paper without its bursting. There is a limit for the mis-use of paper.

*Sir W. Carey.*—That remains to be seen. At the same time I do not think that I could agree to that on behalf of the trade.

*Mr. Ginwala.*—How long do you think that it would take a man to change his habit from one paper to another to profit by this difference of 10 per cent.?

*Sir W. Carey.*—We are informed that he is already changing. He is seeing the difference that exists to-day.

*Mr. Ginwala.*—Import figures do not show that.

*Sir W. Carey.*—We are feeling it in the bazar.

*Mr. Ginwala.*—The import of mechanical wood paper has not increased very much.

*Sir W. Carey.*—It has increased very much, and I think that this year's figures will show a still further increase. We do feel the pinch already in that respect in No. 3 printing—our competitive paper—by reason of the difference that exists in price to-day.

*Mr. Ginwala.*—That may be due to the fact that you are not able to find a market for the whole of your production. You might be competing in the wrong direction. You might be competing against mechanical wood paper which is not a remunerative proposition.

*President.*—If the importer can put into the market paper at 2 annas and you cannot put it in at anything less than 4 annas you will be driven out of the market altogether.

*Sir W. Carey.*—That is a particular class of paper which the Indian Mills have never pretended to be able to make to compete.

*Mr. Ginwala.*—It may be competing with more expensive kinds. That you would admit is not a thing which we may accept as a reason for granting protection. I am just narrowing the issue for the sake of argument.

*Sir W. Carey.*—Except of course that if it is not protected, you will find that it will compete with the higher grades which we do make and, as I say, we are feeling that already.

*Mr. Ginwala.*—If you say that you are feeling that already, you should show us from figures that the imports have increased.

*Sir W. Carey.*—I think that you can see that from the figures that are already obtainable for this year.

*Mr. Ginwala.*—That happens in the case of other industries. In the case of steel for instance, there is the Continental steel and there is the British steel. In that case we did not accept the principle that the Continental steel was at present competing very seriously with the Tata steel which corresponded more to the British standard specifications. Why should we do so in this case, unless we are satisfied that there is a real danger of the newsprint really being substituted for ordinary paper?

*Mr. Bellamy.*—The trouble is that the wide difference between the two prices is not so apparent to the consumer because the wholesaler who imports the paper at £20 a ton retails it at a price somewhere near our 3½ annas. That principle is not only applied to newsprint but right through to other grades of paper. He is able to realise that price under cover of our own prices.

*President.*—If that is so, he is only keeping the Indian Mills alive and it is all to the good.

*Sir W. Carey.*—We are naturally taking advantage to keep up our prices. Otherwise we should be shut to-day. It does not really operate to our wood, as securing such a handsome profit on imported paper under cover of our rates, the tendency is for the wholesaler to push those qualities.

*Mr. Bellamy.*—The importers are making 25 per cent. profit under cover of Indian prices.

*Mr. Ginwala.*—He maintains a higher level of prices for you.

*Mr. Bellamy.*—By making such a large profit in foreign paper, he prefers to invest his money in it. He can only make 5 per cent. on purchases from us.

*Mr. Ginwala.*—In answer to Question 66 you say that prices paid to you by Government are invariably about 15 per cent. under nett market rates. Is that right?

*Sir W. Carey.*—That is right.

*Mr. Ginwala.*—Anyhow our information is that you are getting 5 per cent. more than the market price because you give Government facilities.

*President.*—This competitive tender is a recent arrangement. Does that 15 per cent. apply to the state of things before or after the recent arrangement?

*Sir W. Carey.*—It still applies.

*President.*—You tender at a certain rate?

*Sir W. Carey.*—It is a reasonable proposition in any trade. If we want a large order for 70,000 tons, we will be willing to cut prices. If we don't do it, they buy it from Home.

*President.*—So to speak, the price of Government purchases is settled in open competition. As a matter of fact you are able to get a price in the bazar 15 per cent. higher than if you sell to Government. It is not that they have a reservation of 15 per cent.

*Mr. Ginwala.*—Supposing there is protection, as a result of which your prices and the foreign prices are equalised, why should Government pay you 15 per cent. less?

*Sir W. Carey.*—Government will always get an advantage because of the size of the contract and the big lines which will enable us to have a long run; that is to say, we know Government is going to give us an order for 1,000 tons of a particular kind of paper and we can make that in a long run. It is a saving to the mill.

*Mr. Ginwala.*—How much per cent. do you sell to Government of your production?

*Sir W. Carey.*—38 per cent. Actually it is less this year. 16 per cent. this year to Government alone on full capacity, and 20 per cent. of the present capacity.

*Mr. Ginwala.*—You will never be able to get for your whole output a price which protection is intended to give you under these circumstances. Government's requirements often run to 40 per cent. of what you produce.

*Sir W. Carey.*—Do you mean that Government take 40 per cent. of the output of the present mills? As the mills increase in number Government consumption will decrease in proportion for each mill.

*Mr. Ginwala.*—If on 40 per cent. of the output you get 15 per cent. less you have got to make up that 15 per cent. somewhere else. You have got to get an increase on the other 60 per cent.

*Sir W. Carey.*—I do not think so. They will never allow anything like that.

*President.*—In answer to Question 74 you say "competition is keenest in those qualities in which the Indian mills are most interested, i.e. Fine writings, Printings and Wrappings." In the case of *badami* paper is there any competition from outside?

*Mr. Bellamy.*—Competition is coming in particularly from Germany. An imitation *badami* which is being made from mechanical wood pulp is coming in and is being sold at 3 annas a lb. just now in the bazaar.

*President.*—Is that a recent development?

*Mr. Bellamy.*—Fairly recent: in the last 18 months.

*President.*—It did not exist before the war?

*Mr. Bellamy.*—No.

*President.*—What do you sell *badami* for to-day?

*Mr. Bellamy.*—We realise 3 annas 3 pies a lb.

*President.*—In the answer to Question 76 you have given us your prices for a series of years of white printing and cream laid. Are these the averages for different kinds of printing paper?

*Mr. Bellamy.*—They are average prices but they represent in the main one quality in those lines as we endeavour to produce one standard with the view to low cost, and development.

*President.*—What do you call that quality?

*Mr. Bellamy.*—We call it white printing.

*President.*—I notice that, if not before the war, at any rate since the war you pretty steadily year by year succeeded in realising a higher price than the price of imported paper.

*Mr. Bellamy.*—The reason for that is that we find that we are meeting even severer competition from the Continental markets than before the war. That accounts somewhat for the lower prices of foreign papers compared with ours, i.e., comparatively foreign prices are much lower than normal. We have endeavoured to cut down and have cut down during the last three years by considerable stages, but at the same time we have had to regulate these prices as far as possible, to the cost of production and on account of the

difference in prices have found difficulty in disposing our full output. It is for this reason that we have come down from 1,600 to 1,250 tons a month.

*Sir W. Carey.*—If you refer to the answer to Question 76 we have given you the figures for the Calcutta markets.

*President.*—Even if you are selling 1,300 tons a month, it works to something like 15 to 20 per cent. more than the imported prices. It is remarkable why any consumer should be prepared to pay it. Are you giving them a better article?

*Sir W. Carey.*—We are giving them a better article in so far as the real value of the paper is concerned, that is, as we said yesterday, our paper gives more bulk for the same weight, and therefore they sometimes prefer to use our paper instead of foreign paper. It enables us to have a small advantage over the foreign paper though not to the extent of the difference in price.

*President.*—Do you think what you have told me sufficiently covers the whole ground and explains the difference, or is there any other reason that you have not mentioned?

*Mr. Bellamy.*—I do not think so. The particular reason for the difference is there is keener competition now from the Continent than before the war, and the Paper Trade Journal shows that the figures of import of German printing during the last year were considerably over the pre-war figures. The imports of German white printing during last year show a considerable increase over the pre-war figure not compatible perhaps with the natural increase in consumption.

*President.*—The imports of white printing from Germany were 4,600 tons in 1913-14, and 5,500 tons in 1923-24.

*Sir W. Carey.*—May I read an extract from a German Trade Propaganda Journal for February: "The demand in the wholesale paper trade has increased somewhat during December 1923 and factories are particularly well employed for export at prices that are below the inland prices and consequently seem hardly to be profitable."

*President.*—Is that a German paper?

*Sir W. Carey.*—Yes. Extract from a Berlin Paper Trade Journal published by Mr. C. C. Vogel, Potsdam.

*President.*—There is another aspect of this price that I wanted to ask you about. One of the difficulties in dealing with the proposal of protection on paper is that there is a variety of different kinds of paper and there is a considerable difference of price between them. Would it be true to say that on the whole the prices of the various kinds of paper rise and fall simultaneously, or does it happen that the price of one rises and of another falls?

*Sir W. Carey.*—They rise and fall simultaneously because the basis, raw material is the same for almost all qualities coming from the Continent. It is likely that the prices are regulated by the price of wood pulp.

*President.*—Supposing the Board found it impossible to investigate in detail the different kinds of paper and the prices, which quality would be the best check as a barometer of the rest in your opinion?

*Sir W. Carey.*—Printing paper. I cannot say now what the relation is but a satisfactory scale could be arrived at.

*President.*—What I am thinking of is this. You must have seen our proposal in the steel industry of an off-setting duty if the price of steel fell and an additional duty had to be imposed. What was in my mind was how could that system be applied to paper supposing Government decided that protection must be given to paper? Could it be worked by using, for instance, the price of printing paper as a barometer of the rest? If it has risen or fallen by a certain percentage could you assume that there had been a general rise or general fall?

*Sir W. Carey.*—That is what really happens.

*President.*—It would be necessary of course to fix different rates of duties to start with, but then after that when you had to investigate the question whether there had been a marked fall or rise in the price, do you think it would be possible to take one particular kind of paper, say, printing paper,

as the index of the rest, and do you think we could safely assume that the prices of other kinds of paper had risen or fallen in about the same proportion?

*Sir W. Carey.*—I think it might be done that way, but our information from another country which has really made a special study of tariff on paper, namely the United States of America, is that they have eventually to divide it up. Then there are a great many more grades of paper in use there and manufactured there than there are at present in India. As a rough guide probably white printing would be a barometer, but sooner or later I think it will have to be divided up as they have done in the States. You possibly know the States Tariff.

*President.*—We have not got the staff in India here to work out details as they have in America.

*Sir W. Carey.*—Our letter\* that we wrote in yesterday is an attempt to arrive at a method of fixing what you have just been speaking of on the same basis as on steel, the difference between the manufacturer's costs, seller's costs and the import price.

*President.*—Would you like to put in any invoices you mentioned now?

*Sir W. Carey.*—We would like to have some of them back as they are very important to us.

*Mr. Ginwala.*—Are these all recent invoices?

*Mr. Bellamy.*—Yes. There is one here from Alexander Cowan & Sons, a firm in the United Kingdom, offering superior cream laid paper foolscap for 2½d. per lb. c.i.f. This works out to 2 annas 7 pies a lb. delivered. We have to add to that 8 pies for duty which brings it up to 3 annas 3 pies per lb.

*Mr. Ginwala.*—Landing charges and other things?

*Mr. Bellamy.*—That would amount to a very small percentage. We have it in the Trade Journal, which we quoted yesterday I think, that the cost of manufacture of M. F. printing, which is the cheapest sulphite paper imported in India, is 3 annas 6 pies.

*Mr. Ginwala.*—What is the date of the invoice?

*Mr. Bellamy.*—10th January 1924.

*Mr. Ginwala.*—These are importers in this country?

*Mr. Bellamy.*—They have Agents.

*Mr. Ginwala.*—They accepted the order at these rates?

*Mr. Bellamy.*—Yes.

*Mr. Ginwala.*—Delivery to be made when?

*Mr. Bellamy.*—From six to eight weeks.

*Mr. Ginwala.*—What is the port of shipment?

*Mr. Bellamy.*—From a Home port.

*Mr. Ginwala.*—But it does not necessarily mean that it is of British manufacture.

*Mr. Bellamy.*—Undoubtedly it is supposed to be British manufacture, but we cannot tell. In this Trade Journal I think it is mentioned there that the exports of British paper to India last year amounted to 34 per cent. of the total imports into India, but our own experience in the bazaars tells us that there is comparatively little truly British paper coming in, a lot of this figure represents re-exports.

*Sir W. Carey.*—That is what is called a representative case. In addition to that we have put in a copy of a letter from a private friend of ours about seeing foreign paper passing through English Mills.

*President.*—It would be useful if, with each invoice you put in, you would send a short note drawing attention to what you consider the important points, for instance, the kind of comments you were just making.

With regard to Question 79 your invoices could to a certain extent supply the information, but there is another aspect of the question which comes in, namely, have you any recent information as to the cost of production in Europe, any actual figures?

*Mr. Bellamy.*—If we might refer to John Dickinson's statement who are manufacturers in Great Britain, they themselves admit cost of manufacture at 3 annas per lb. and I think it might be safely argued that that is putting it at a very low figure.

*Sir W. Carey.*—We had it in recent Trade Journals at 3½ annas for white printing and cream laid.

*President.*—If you could refer us to them it would be useful. Has there been any attempt to examine the cost of production in detail in any Trade Journal?

*Sir W. Carey.*—The Home paper makers are very particular about that. There is a great difference between the American Paper Trade and English Paper Trade. It is very difficult to get that.

*President.*—But there is this to be said also. It is not only the cost of manufacture in England which is important. Personally I should think the cost of manufacture in some of these Continental countries is more important. I do not think it is the smallest use taking the German cost because the mark has not come to its level.

*Sir W. Carey.*—All the information that we have been able to obtain of Scandinavian costs showed that the Continental cost had a tendency to go high, and that a certain paper which is coming in now is not being produced and is being sold here at a figure at which they would not care to sell at local markets. We have the Norwegian export figure also and shall give it in the abstract asked for.

*President.*—In answer to Question 81 you refer to dumping of paper in India. You say "It must be regarded as a permanent feature, as the supply of paper in Europe at present rate of manufacture must exceed the possible demand for many years to come." If so, why do you call it dumping? If the conditions are as you describe, it ceases to be an abnormal feature and it is thoroughly normal. I entirely agree with the statement that it applies to a great many other things besides paper.

*Sir W. Carey.*—It none the less emphasises the need for some assistance.

*President.*—It merely means that the paper is going to enter at a certain price at which the Indian manufacturer cannot produce.

*Sir W. Carey.*—Yes.

*President.*—Then going on now to Question 85 you tell us in answer to clause (c) "Taking the present-day cost of labour together with the extra number required to do the same work, it might be estimated that the cost of labour is much about the same." That really we went into in another connection yesterday. Then you mention a number of disadvantages under which the manufacturer in India labours. Well, what it comes to is this. That being so the disadvantages undoubtedly exist, but does there exist in India any natural advantage to the industry which will enable it to hold its own eventually without protection? You have no advantage in the cost of raw material, and no advantage practically in coal. As regards collection and transport I understood your view is that you have to bring your materials from a long lead.

*Sir W. Carey.*—But we are not saying that the raw materials in India have been fully exploited by a long way, neither did we say so yesterday. I should not like to maintain that they have.

*President.*—You say that the raw materials are within easy reach of the best places to establish factories?

*Sir W. Carey.*—That of course can be improved upon, if the trade became sufficiently improved and pulp or fibre can be brought near your raw material and your manufactured pulp can be sent to the paper mill. You can send your pulp in the same way as is done in Europe.

*President.*—I have taken into account all that you have said about these things but the general impression in my mind is that, except by the exhaustion of the wood pulp, I do not see how grass would be able to hold its own.



*Sir W. Carey.*—We expect, as we said in the statement put in yesterday, to get our raw materials' cost down especially in the immediate future, once the mills are able to get anything near to their own full output. Apart from the question of bamboo, there is also another fibre which we had not mentioned here but which we had used at different times and which is very easily obtained and very cheap. They are the straw and *moonj* grass. These are found in very large quantities and easily obtainable.

*President.*—But can paper be made economically from them?

*Sir W. Carey.*—In our original reply we have omitted the fact that we have used in considerable quantities at different times both *moonj* grass and paddy straw, not as a main raw material, but as very considerable auxiliary, to the extent in some years of thousands of tons.

*President.*—You do not seem to be using any just now, at a time when you would resort to any means of bringing down your costs.

*Sir W. Carey.*—These are to be used for filling up. They do not take so much bulk or require so much boiling.

*President.*—Straw does.

*Sir W. Carey.*—Of course there is an additional possibility. Straw boards, of course, can be made quite easily. With regard to cost of plant and machinery, cost of labour and so on, these things may, of course, in future improve.

*President.*—The point is this that, in accordance with what the Fiscal Commission laid down, there ought to be a reasonable prospect that the industry will be able to hold its own after some time without protection.

*Sir W. Carey.*—We are hoping to do so.

*President.*—But it is not clear from your evidence.

*Sir W. Carey.*—You will find that in our further covering letter.\*

*President.*—In the case of bamboo, the field has not yet been fully investigated?

*Sir W. Carey.*—No. With regard to the cost of grass we anticipate it will go down next year very considerably.

*President.*—You would even then have no particular advantage as compared with the people who make paper from wood pulp.

*Sir W. Carey.*—If you take grass at Rs. 2 a maund, that is equivalent to Rs. 54 a ton. We expect within the next six months if we have full working to have our grass at a price which will give us an equivalent of £15 c.i.f. for wood pulp; that is to say, we shall not then be worse off at the present-day imported price of wood pulp.

*President.*—It seems to me that there are several elements in the figures which ought to have been taken into consideration.

*Sir W. Carey.*—We may be able to satisfy you on that.

*Mr. Ginwala.*—In answer to Question 74 you say "The competition is keenest in those qualities in which the Indian mills are most interested, i.e., Fine Writings, Printings and Wrappings." You use the term "Wrappings;" does it correspond to "Packing?"

*Mr. Bellamy.*—In "Wrappings" we have included "*Badami*" although I admit it is used a lot as writing paper, and, being a cheap paper, is used for wrapping as well.

*Mr. Ginwala.*—I take it that the imported packing paper is used as packing paper and is not used for writing. That paper is not manufactured by you?

*Mr. Bellamy.*—Theirs would consist only of brown paper.

*Mr. Ginwala.*—The point is this. If we are to make any recommendations for protection, they must not extend beyond the requirements, that is to say, they must not cover paper that is not manufactured in this country, on a reasonable scale.

*Mr. Bellamy.*—We manufacture these qualities in fairly large quantities, namely, brown paper and *badami*.

*Mr. Ginwala.*—How much?

*Mr. Bellamy.*—About 10 per cent. of brown paper.

*Mr. Ginwala.*—That is not made out of grass?

*Mr. Bellamy.*—That is made out of cheaper fibre and grass pickings.

*Sir W. Carey.*—That is to say, grass which we have to pay for but which is not suitable for making white paper is used for making brown paper.

*Mr. Ginwala.*—Is there a considerable quantity of this kind of paper manufactured in this country?

*Sir W. Carey.*—There is a very considerable quantity of it, particularly in the case of other mills.

*Mr. Ginwala.*—Which mills?

*Sir W. Carey.*—The Bengal Paper Mills and the Lucknow mills; and also in Punalur where they make nothing but brown.

*Mr. Ginwala.*—That may be called pucking paper?

*Sir W. Carey.*—Yes.

*Mr. Ginwala.*—What are the kinds of paper that you manufacture against which this foreign paper competes, and the quantities that you manufacture and the quantities that are imported?

*Sir W. Carey.*—We will amplify that.

*Mr. Ginwala.*—Can you tell us whether a particular kind of paper is made of esparto grass or chemical wood pulp?

*Sir W. Carey.*—We can by chemical laboratory test.

*Mr. Ginwala.*—What I mean is, can the Customs authorities tell?

*Sir W. Carey.*—With the assistance of an experienced paper maker they could.

*Mr. Ginwala.*—Can you tell by looking at it that a paper is made of mechanical wood pulp?

*Sir W. Carey.*—I don't think you can always. It would not be possible unless the mechanical pulp used was pretty considerable.

*Mr. Ginwala.*—Newsprint?

*Sir W. Carey.*—Certain printings contain only a small proportion of mechanical pulp: that would be difficult to ascertain.

*Mr. Ginwala.*—By chemical test can you tell whether it is made out of wood pulp or other pulp?

*Sir W. Carey.*—We can tell you whether it contains a large percentage of mechanical wood pulp or not. Given a laboratory and given a capable papermaker chemist I have no doubt it can be done.

*Mr. Ginwala.*—It is not known just now really speaking how much of paper that comes to this country and competes against you is made of wood pulp?

*Mr. Bellamy.*—I don't think the real figure is known.

*Mr. Ginwala.*—Then why do you say it is mainly so?

*Mr. Bellamy.*—I am sorry I misunderstood your question. We can tell ourselves what materials a paper is made from.

*Mr. Ginwala.*—But the point is, it is merely a conjecture on your part.

*Sir W. Carey.*—We have sufficient evidence in our own laboratory from the samples collected by our own salesmen that there is a very large proportion of mechanical pulp paper. We always test these samples ourselves from all over the country.

*Mr. Ginwala.*—So far as the better class of paper is concerned, I take it that you can compete. If, therefore, it is provided that paper made out of mechanical wood pulp or chemical wood pulp must pay a higher duty which

equalizes foreign and domestic prices so far as you are concerned, and other kinds of paper are excluded, will that serve the purpose, assuming that protection is given?

*Mr. Bellamy.*—It might do so, provided it was stated that even if they contained a partial quantity of mechanical or chemical wood pulp they fell under the duty.

*Mr. Ginwala.*—If that was put down so far as you are concerned you would be satisfied?

*Sir W. Carey.*—Yes, on the proviso that paper containing any wood pulp fell under the duty.

*Mr. Ginwala.*—And by laboratory examination that can be ascertained?

*Sir W. Carey.*—Yes.

*Mr. Ginwala.*—Then coming on to your answer to Question 76, am I right in stating that it is in the last two years that you have felt the competition most?

*Mr. Bellamy.*—Since after the trade boom of early 1921. Since that broke we have been facing very serious competition.

*Mr. Ginwala.*—A good deal of the competition was due, I take it, specially in the present year, to the exchange?

*Mr. Bellamy.*—Yes, and slump in the beginning.

*Mr. Ginwala.*—By exchange how much have you suffered within this year, say, 1923-24?

*Sir W. Carey.*—We suffered to the extent of 6 or 7 per cent.

*Mr. Ginwala.*—You are asking only for 10 per cent. more?

*Sir W. Carey.*—Yes.

*Mr. Ginwala.*—So that the bulk of that is a question of the rectification of the exchange?

*Sir W. Carey.*—If the exchange comes to a higher figure, it will neutralize.

*President.*—Was the additional 10 per cent. based on 1s. 4d.?

*Sir W. Carey.*—Yes.

*Mr. Ginwala.*—The prices which you have given, viz., 3 annas 7 pies and 3 annas 10 pies for 1924 are at a higher rate of exchange.

*Sir W. Carey.*—The exchange at that time was anything between 1s. 4d. and 1s. 4½d.

*Mr. Ginwala.*—Up to what date was it?

*Sir W. Carey.*—Up to April, I should say early May.

*Mr. Ginwala.*—Surely exchange was higher than 1s. 4½d.?

*Sir W. Carey.*—1s. 5d. was not attained till about a month ago. I think you may take it that these figures are based on 1s. 4½d. when the replies were drafted.

*Mr. Ginwala.*—What I want to know is how much of it is due to exchange?

*Sir W. Carey.*—I should say none. That is to say, the exchange which is prevailing to-day is making it more and more difficult for us all the time; we are feeling it.

*Mr. Ginwala.*—We must take the price at some definite point and it must be as near as possible to the time when we are making our recommendation.

*Sir W. Carey.*—I may say that all our figures were based on Rs. 15 to the pound, and we have always made our calculations on that basis.

*President.*—If we take the exchange at 1s. 4½d. in the first four months of 1924, we can with a little arithmetical calculation arrive at what the price would have been at 1s. 4d.; in that way we can ascertain for ourselves.

*Mr. Ginwala.*—The Finance Member has budgeted at 1s. 5d.; do you accept that as a reasonable rate for the whole year?

*Sir W. Carey.*—I wish I knew!

*Mr. Ginwala.*—In the case of our recommendations with regard to steel we took the exchange at 1s. 4d. At the time the recommendations came up before the Assembly it was very near 1s. 5d.

*Sir W. Carey.*—I think the prospect at the present time is that the exchange will be very much nearer 1s. 6d. than 1s. 4d., and it looks like remaining so for a time, so we should be very sorry to base our desire for protection upon 1s. 6d. exchange. In America they had the same difficulty, and they got over it by fixing an additional percentage of so many cents before they took in the percentage.

*Mr. Ginwala.*—I notice that you have obtained 6 to 8 pies better than foreign paper; what is it due to?

*Mr. Bellamy.*—That represents the value of our sales for the market only, that is, market apart from all supplies to Government.

*President.*—But you have just told us that your supplies to Government are 15 per cent. below the market, therefore that makes it much worse.

*Sir W. Carey.*—But I should not think so; these prices were based on the Calcutta bazar.

*Mr. Ginwala.*—It has still got to be explained.

*Sir W. Carey.*—We happened to obtain a better price.

*Mr. Ginwala.*—Can you give us your average price—leave alone the Calcutta market—that you have realized on the whole of your output?

*Sir W. Carey.*—We can give you a supplementary statement.

*Mr. Ginwala.*—It is very difficult for us to determine the foreign price. What I am asking is this: supposing from these average prices that you realized for the whole of your output if we deducted the duty and made a certain allowance for the local charges, commission and so on, would that very nearly represent the c.i.f. price of the imported paper? That will eliminate these fluctuations you are talking about from your point of view. Supposing you realized a price of 4 annas 6 pies and we want to work back to c.i.f. price from that figure. We assume that you are getting the price at which foreign paper of corresponding quality sells in this country at present. We want to determine the price of foreign paper by working back from the price which you get in the bazar. If you take 4 as. 6 pies as the price realized by you, and if you deduct the duty of 15 per cent. which the foreign paper has to pay and certain other charges, shall we very nearly get to the foreign price?

We want to make a comparison. Suppose the foreign manufacturer fixes his price with reference to your price. You fix your price at present with reference to the foreign price. I will put it the other way, viz., that the foreign manufacturer fixes his price with reference to your price because there is no exact foreign paper the price of which we can compare with your price.

*Sir W. Carey.*—I can see no objection to that just now. If we do we shall let you know, or if we can suggest anything better we shall let you know.

*Mr. Ginwala.*—Coming on now to answer 85 (a) what we wanted was the money value of the disadvantages.

*Sir W. Carey.*—As far as we are concerned with the raw materials we make so much of it ourselves that it is not so great as in the case of others. We can get you the figures.

*Mr. Ginwala.*—We want to know what it means to you in a year.

*Sir W. Carey.*—We will let you have the figures.

*Mr. Kale.*—Are the prices that you have given in answer to Question 76, net prices?

*Mr. Bellamy.*—They are net realized prices.

*Mr. Kale.*—Exclusive of commission?

*Mr. Bellamy.*—After all charges have been deducted.

*Mr. Kale.*—In answer to Question 79 you have complained about the foreign manufacturer selling at or below cost, but I want to put it to you, in the same way as the President has put it to you, whether it is not an ordinary business method. You have, so far as I see, been doing the same thing yourselves, selling a certain quantity below the price at which you sell to other people. The foreign manufacturer is selling a certain quantity in India at a price below that at which he is selling in the United Kingdom.

*Sir W. Carey.*—We have been forced by the Home people, and look like being forced to a still greater extent unless we can get some relief, to sell below the price at which we can make it. But it is easily understood that we cannot continue because we shall have to shut up. It may be an ordinary business method, but it has already resulted in the closing, to my own personal knowledge, of six mills and there are many others in the United Kingdom and Europe which are in the same position.

*Mr. Kale.*—Is it not a practice which is common to other industries?

*Sir W. Carey.*—It may be, but I don't support the practice on that account.

*President.*—For instance, in the case of Indian pig iron, they don't get in Japan or America the price which apparently they realise in India.

*Sir W. Carey.*—Oh, no. But they cannot continue for any great length of time below the works costs. That is what we maintain.

*President.*—The evidence is much more complete as regards their selling at a lower price than they realise in their own country than about their selling below works cost. There is always this to be said. Many mills may be selling below cost, but the best may be making a profit.

*Sir W. Carey.*—That is true.

*President.*—That is a point that has got to be considered. They can force the pace.

*Sir W. Carey.*—Yes.

*Mr. Kale.*—The point is that, when there is mass production and manufacturers have to rely to a considerable extent upon the export trade, this practice is bound to continue and it is likely to be a permanent disadvantage to the Indian manufacturer.

*Sir W. Carey.*—Yes, and it is for this reason that we are asking for additional help.

*Mr. Kale.*—Suppose that help is given to you for five years, what guarantee is there that there won't be a revival of this practice when you will again come to the Legislature and Government and ask for help?

*Sir W. Carey.*—In that short period we fully anticipate that we will be able to come down very considerably in our works costs. With that object we have been working and we are still continuing to do so, and also to organise our raw materials. We anticipate getting the advantage of that within the next two or three years. In the meantime we should be forced to shut unless we get this help.

*Mr. Kale.*—Do you mean to say that, if this help is given temporarily, you will be in a position later to meet successfully this practice that at present prevails and is likely to prevail later on?

*Sir W. Carey.*—It depends on the extent to which that practice is able to continue. We have seen the result of it already in the shutting down of many English mills purely owing to this kind of attitude in India and elsewhere, and I think myself that it is already commencing to some extent to rectify itself. The mills at Home are stating that they cannot go on at this rate because, if so, there is general ruin ahead and they are beginning to pull up.

*President.*—Surely it is the Continent of Europe and not Great Britain which really dictates the price. The British manufacturer is not by any means the master of the situation.

*Sir W. Carey.*—May I just read this? We have stated in our letter—

“If an additional 10 per cent. duty is imposed we do not look to get this figure of four annas per lb. of paper but we do look to stabilise sales round about the present prices, thereby enabling us to fill our works with orders at present prices.

We realise that it is incumbent upon us to reduce costs further and we can see our way next year on full working to reduce our costs to a figure which, if prices are stabilised on the present basis, will enable us to survive.”

*Mr. Kale.*—Am I to understand from what you have been telling us that, in the course of the next four or five years, competitive prices of paper in foreign countries will rise or in any case will stabilise themselves round a higher figure? That is the inference which I am inclined to draw from it.

*Sir W. Carey.*—We have reason to believe that, on the information we get from reading trade reviews and from private advices, the English prices anyhow are round about bottom to-day; but as the President has said, it is impossible to foresee what the price of foreign paper will be, though I don't suppose that they will go on cutting; and as regards ourselves in the letter we have dealt with the question.

“With regard to the third condition of the Tariff Commission that the industry should be able eventually to stand on its own feet, we would point out that the industry stood for 30 years before the War though with extreme difficulty at times, and with the awakening of India to industrial conditions and the special natural necessity of a paper industry to any advancing nation we see no reason on broad lines why under normal conditions the industry should not again exist without protection.”

*Mr. Kale.*—To what extent have you to suffer from competition from the Continent and to what extent from the United Kingdom?

*Sir W. Carey.*—I think that the bulk of the imports is from the Continent to-day, either direct or shipped through British dealers.

*Mr. Kale.*—I find it rather difficult to believe that this competition will in any way tend to disappear in the course of five years if it is Continental competition.

*Sir W. Carey.*—Within that period we anticipate that we will be so much better off in our works costs.

*Mr. Kale.*—Do you believe that you will be able to compete in that case?

*Sir W. Carey.*—Yes: taking (and this can only be an estimate) that the world prices of paper to-day are somewhere near the bottom.

*Mr. Kale.*—Even on the Continent?

*Sir W. Carey.*—Yes, apart from the question of exchange.

*Mr. Kale.*—Leave exchange out of account. But taking Germany at the stage in which the country will be placed in five years do you believe that the Germans will not cut down prices?

*Sir W. Carey.*—It is very difficult to estimate what they will do.

*Mr. Kale.*—It is an uncertain and difficult matter?

*Sir W. Carey.*—It is.

*Mr. Kale.*—You say on page 18 in answer to Question 85 (c) that Indian mills can buy auxiliary raw materials and consumable stores on practically as cheap a basis as English mills and sometimes cheaper. Am I to take it that in the matter of auxiliary raw materials you are better off than British mills?

*Sir W. Carey.*—I think there we have nothing to be afraid of as regards British competition.

*President.*—You would not say that you are better off?

*Sir W. Carey.*—Certainly we should not be worse off except for the fact of maintaining bigger staffs. Many of them are produced in the country. Rosin is available in the country. We ourselves have done our best to introduce clay. It will always be there to some extent and other auxiliaries such as rags and waste paper are natural in the country. I have mentioned others also such as straws, etc. Salt is, of course, imported and will continue to be imported. Lime is natural in the country and we always use it. I don't think that we have anything to fear on this point.

*Mr. Kale.*—In answer to Question 84, you have quoted the opinion of your salesman or some one else about the Continental paper being passed off as British manufacture. Do you seriously believe that it is going on on a very large scale? Have you reason to believe that?

*Sir W. Carey.*—I think that we have reason to believe that many British dealers are doing it.

*Mr. Kale.*—I have often heard it said that British manufacturers, taken as a whole, have a very high reputation for honesty. Is it a departure from that or is it common?

*Sir W. Carey.*—I am not saying that these are manufacturers. I am saying that these are dealers.

*Mr. Kale.*—The gentleman says that these are taken to mills. In any case, the manufacturers have a hand in it. They are not taken to shops and godowns.

*Sir W. Carey.*—I suppose that there are black sheep everywhere. We feel the pinch and we object. It may appear to them as a legitimate form of business.

*Mr. Kale.*—Is it because they are feeling the pinch that they are driven to this practice?

*Sir W. Carey.*—The middlemen here are the men who benefit by it. I take it that it is to get the advantage of German exchange and it is a temporary phase.

*Mr. Kale.*—Is it a temporary phase?

*Sir W. Carey.*—It will probably continue as long as the German exchange is not fixed.

#### VII.—EQUIPMENT.

*President.*—The German exchange has been most steady for the last three or four months.

You tell us that a complete 4-machine mill is an economic unit. How does it compare with your own mill?

*Sir W. Carey.*—Ours are 4-machine mills.

*President.*—Each of them?

*Sir W. Carey.*—Yes.

*Mr. Ginnala.*—Have there been any important alterations in the manufacture of paper since the war?

*Sir W. Carey.*—There have been many suggested improvements in the processes, not all of which are proved yet. In fact some are still under experiment in Sweden, France and in Great Britain.

*Mr. Ginnala.*—Suppose you were rebuilding your mill, would you repurchase the machinery that you have got?

*Sir W. Carey.*—A very great deal of it would be the same.

*Mr. Ginnala.*—And the chemical plant which you have bought recently, also?

*Sir W. Carey.*—The chemical plant would be the same.

*Mr. Ginnala.*—What about the other things in the mills?

*Sir W. Carey.*—As I say, in the mills the machine might be bigger; it might have a more rapid drive. The preparing plant might possibly be

rearranged somewhat which we have done already. Apart from that I don't think that very much is required. We have already done so much.

*Mr. Ginnala.*—The chemical plant is a thing which you may or may not have. Beyond the chemical plant, what have you done?

*Sir W. Carey.*—The principle is very much the same: In addition to what we have given you in answer to Question 93, we have made the following:—

Large saving of labour in boiling, breaking and beating, and in pumping pulp across the mills which used to be handled.

The pumping system for pulp which is intended to give cleaner and cheaper paper is giving the latter advantage and will give full value for the former as soon as the strainers are fully installed. These strainers have now arrived and are in course of erection.

As soon as the big storage tanks for bleaching pulp in both mills were completed, the system gave us better value for bleach than before, and also more storage behind the mills. This has only been made possible by our electrolytic bleaching system, from which chlorine is supplied to both mills.

The steam and boiler plant at both mills have been put in order and new boilers erected. The machines are now being taken in hand by our expert. This is purely a matter of time and not of expenditure.

To sum up, both mills are capable of producing the same output as before of better quality paper and at reduction in cost evidenced by the figures.

So except what you might call very advanced recent improvements, we have everything in our mills. Many of these very advanced improvements are now still under experiment.

*Mr. Ginnala.*—But I thought you stated before the Fiscal Commission that every seven years a plant goes out of date.

*Sir W. Carey.*—Only certain portions of it. That is about 3 years ago.

*Mr. Ginnala.*—In four years it will be again out of date?

*Sir W. Carey.*—In four years we shall either be running with present plant or not at all.

*Mr. Ginnala.*—The moment one is told that the plant was built between 1882 and 1905, one gets the impression that there is something very ancient about your equipment. It is a period of 23 years.

*Sir W. Carey.*—During those years there has been comparatively little change. We have modernised it now.

*Mr. Ginnala.*—It may be so. The plant which was put up in 1882 has done more than 40 years' work now and therefore it is reasonable to suppose that it has seen its best days and that it is out of date.

*Sir W. Carey.*—May I know what is the object of the question.

*Mr. Ginnala.*—The object of the question is to find out whether your costs are not heavier than they ought to be because of the equipment not being up-to-date. I will explain to you what the position is. If we were to make any recommendation for protection, it must be on the basis of a fairly modern up-to-date and well equipped paper mill. We shall have to determine the cost of production in such a mill and make our recommendation accordingly. I want to satisfy myself whether your mill is up to the standard.

*Sir W. Carey.*—I do not suggest for a moment that you could not buy outright a plant fitted up with the newest ideas which would be able to work at a slightly lower figure than ours, but you will find all over the world that it is the condition in the paper trade. As long as you keep the preparing plant up-to-date, your machines will be just as good as they



were when laid down first. We have already discussed this yesterday. The whole of our effort for the past three years has been to bring our back end of the mill into line with modern practice, and I think we may say that we have got that.

*Mr. Ginnala.*—Can you tell us how much of this plant that you have got is more than 10 years old?

*Sir W. Carey.*—I think that we may say that there is nothing left in the mills except the machines. Everything else has been brought up-to-date, and the machines, as I read out to you, are being brought up-to-date.

*Mr. Ginnala.*—By machines you mean the paper making machines?

*Sir W. Carey.*—Yes, the last part of the paper making process.

*Mr. Ginnala.*—That may put a different complexion on the facts of the case.

*Sir W. Carey.*—It is owing to that our cost has gone down very much. I would be very pleased to give an ocular demonstration at any time.

*Mr. Ginnala.*—But the trouble is that we cannot say that this is what it ought to be.

*Sir W. Carey.*—Expert people can tell you. We have taken the greatest thought with the object of bringing the whole back end of both the mills as closely up-to-date on modern practice as is possible.

*Mr. Ginnala.*—I have put you this question because you might have heard the criticism on the Indian industry is that it is not well equipped and that cost goes up because of that.

*Sir W. Carey.*—We have taken the bull by the horn there very distinctly, because we knew that the danger would be round about this time, whether there was a question of protection or not, and so, as we said, 6 or 7 years ago we spent the money in between in bringing the mills up-to-date.

#### VIII.—CAPITAL ACCOUNT.

*President.*—In answer to question 98 you say "Since manufacture commenced Rs. 57,97,221 up to March 1923 has been written off for depreciation." We would like to have how much under each of these sub-heads (c), (d) and (e) you have written off.

*Sir W. Carey.*—Yes.

*President.*—In Question 99 you tell us "As a general statement in our opinion the cost of new mills of the same size, on the same site and working the same materials, would be not less than double our present value." That takes you to about Rs. 90 lakhs.

*Sir W. Carey.*—We have since received cable advice, dated the 10th July, from Messrs. Bertrams, Ltd., Edinburgh. To replace a mill such as the Titaghur Mill which is the old mill including all the plant we have there such as soda recovery plant, bleaching plant and so forth they estimate at £320,000 f.o.b. Of course, what you add to that depends where you are going to put your mill, railway sidings, water tanks and that sort of thing. If it is near Calcutta or if it is up-country, you must allow for additional cost.

*President.*—It is for you to tell us.

*Sir W. Carey.*—I should say roughly it is £100,000—200,000 according to the locality. They say approximately that new mills of similar size would cost not less than £600,000 each.

*President.*—The importance of that is that you require a capitalisation of Rs. 450 a ton.

*Sir W. Carey.*—That, of course, depends on the way in which you put up your mill. To replace our two mills to-day at Calcutta would cost about £1,250,000.

*President.*—You told us before that the cost of new mills would be not less than double your present block value.

*Sir W. Carey.*—The Kankinara Mills do not include all these improvements.

*President.*—If these things are desirable and if they lead to economic production, whatever new mills you put up would you not provide for all these?

*Sir W. Carey.*—I have given you the newest figure we have received from Home.

*President.*—What I really want to get at is this. If somebody wishes to start the manufacture to-day, what is his capitalisation going to be per ton of output?

*Sir W. Carey.*—If he wants an up-to-date 4-machine mill with filtration and bleaching plant, it would cost him £300,000 f.o.b. *plus*, according where he put his mill, anything from £100,000 to £200,000 for railway siding, jetties and so forth.

*President.*—It is no use leaving it to me. Take it at your own place.

*Sir W. Carey.*—£800,000 was the figure for a four-machine mill.

*President.*—It roughly comes to Rs. 1,80,00,000. Your output is 18,000 tons. That means a capitalisation of about 1,000 rupees per ton.

*Sir W. Carey.*—Yes.

*President.*—You have to add Rs. 100 to your cost of production before you get 10 per cent. on your capital?

*Sir W. Carey.*—Yes. We have taken it here in the letter which we put in yesterday.\*

*President.*—It is a very large addition to the cost.

*Sir W. Carey.*—This is particularly on a very complete mill as is quoted here. But there are many people who would be able to work mills without all these additions. We have to deal with the Hooghly water which in the rains we cannot use without filtering. We need not necessarily make bleach.

*President.*—We are taking it on the basis that it pays you to make your own bleach. No doubt it would increase your capital, but if it pays you it would reduce your cost of production.

*Sir W. Carey.*—That is true, it does.

*President.*—Otherwise it is rather a formidable capitalisation.

*Sir W. Carey.*—It is a big figure now. Paper making is always expensive.

*President.*—What would it cost a manufacturer in Europe, what would be his capitalisation if he had to get the same output?

*Sir W. Carey.*—£300,000 without allowing for his buildings or his erection or his bungalows. He would not have bungalows probably in the same way as we have here. He will have a very much smaller site than here. His railway sidings would probably cost less also. A mill at Home costing £300,000 would be a complete copy of our Titaghur Mill. Including all these additions. This is the figure given.

*President.*—What is the date of that?

*Sir W. Carey.*—10th of July.

*Mr. Ginwala.*—With regard to this figure you gave just now of Rs. 25,28,000: You see the block value of your machinery and plant as it is given in (d) in answer to Questions 96 and 97 is Rs. 28,26,000. It means that you practically regard your old machinery as scrap?

*Sir W. Carey.*—Yes.

*Mr. Ginwala.*—What remains now on your books is practically what you have put in?

*Sir W. Carey.*—Practically.

*Mr. Ginwala.*—And your total capital is 17.50 lakhs in ordinary shares and Rs. 8.35 lakhs in preference shares and Rs. 30 lakhs in debentures?

*Sir W. Carey.*—Yes.

*Mr. Ginwala.*—These come to Rs. 56 lakhs. Then your block value is Rs. 45 lakhs?

*Sir W. Carey.*—Yes.

*Mr. Ginwala.*—In claiming a return, you can claim it either on your block value or on your share capital, on the supposition that your assets are not very much below your capital.

*Sir W. Carey.*—It is certainly somewhat below.

*Mr. Ginwala.*—You are claiming a return on what you consider to be the present-day replacement value. You cannot have it both ways. If you claim a return on your replacement value, then you have got to show that there is going to be a substantial reduction in the cost of production. There is some reduction in your actual realised cost but it is quite another thing to say that there would be a reduction in cost commensurate with the cost of replacement.

*Sir W. Carey.*—We are at the present moment expecting to bring down the total works cost. We have already come down in June to a total working cost which is certainly not higher than what we have been informed by the Trade Journal as the cost of working in England, and that included making our own pulp. We have the figure of us. 3.448 as compared with 3½d. in England for the same month.

*Mr. Ginwala.*—It is a difficult question as to what we should take as your capital.

*Sir W. Carey.*—Foreseeing this difficulty we have sent you this extra letter.

*Mr. Ginwala.*—In calculating what ought to be your capital I feel this difficulty as to which of these three figures I am to take, whether to take the block value, share capital *plus* debentures or what you claim to be to-day's replacement value. If I take the replacement value then it would jump by about Rs. 100 per ton: that the business may well bear provided the cost goes down.

*Sir W. Carey.*—We are bringing the cost down and we expect to bring it down still further.

*Mr. Ginwala.*—How are you far that matter to prove that these costs will not be any higher if the plant was replaced altogether?

*Sir W. Carey.*—May I say this. We are informed that the price of white paper in the most modern mills at Home is 3½d. We cannot give you any further evidence than giving you the cost of this mill. We are working the cost to-day, in the month of June, at 3½ as. and we hope to get down by half an anna or even more eventually. The same paper is being made by the most modern mills to-day in the British Islands at 3½d. and it is costing us rather less than 3½ as. in the month of June. I cannot give anything further than that, I am afraid. Taking the replacement value, as we have said, at Rs. 130 lakhs, we are merely asking for an average of 8 per cent., that is to say so much for preference.

*President.*—I could not accept that calculation as giving a correct measure of the amount of protection required, if the object in view is merely to keep the existing paper mills alive. If the scheme of protection is planned so as to permit the establishment of new mills, then the replacement cost of the existing mills may be the best guide to the capitalization necessary per ton of output. But in that case the cost of production would be taken at a figure below yours. It would not be right to take your present works cost and the replacement cost of the fixed assets. The increased capital cost should be counter-balanced by assumed lower works costs.

*Sir W. Carey.*—We are facing all the time the fact that we are trying to bring ourselves into line with the third condition of the Fiscal Commission

that we must eventually stand upon our own feet, and we believe we can do it on our present mills, with some additions that we are making from time to time, and with our present *bandobust* for materials. May I say again it is quite a possibility to build a very good mill, indeed a first class paper mill, without going to this cost. I have no doubt if a man went to Sweden or Germany he might get quite a different figure to this. These were the people who built the mill originally and we went to them. It is quite possible to get a mill at a very much lower figure.

*Mr. Ginwala.*—About these dividends I want to know what the actual profit was and how was the allocation made during these years?

*President.*—What Mr. Ginwala wants is the profit to be distributed annually and the actual distribution. In arriving at the distributable profit, depreciation, interest and agency charges should be deducted from the profit shown in the balance sheet.

*Sir W. Carey.*—I understand that from 1917 onwards you want the total distributable profit. One point I should like to make clear, on which there were certain comments in the previous evidence, is as to the way of paying dividends to shareholders. What I wish to say is that the average dividend which has been earned up to the time when we have again ceased to pay dividends has been 12 per cent. on the ordinary capital.

*Mr. Ginwala.*—You paid nearly Rs. 50 lakhs in dividends, then you spent about Rs. 28 lakhs on your machinery and you had Rs. 30 lakhs in reserve?

*Sir W. Carey.*—Yes.

*Mr. Ginwala.*—Was this reserve in addition to what you spent on machinery?

*Sir W. Carey.*—That has since been all used in the mills in one form or another. The reserves altogether amounted in one period to something like Rs. 70 lakhs.

*Mr. Ginwala.*—You say in answer to Question 107 "Total reserve fund of Rs. 30 lakhs was accumulated in the years 1918 to 1921. This was built up from surplus profits during the war years and has since all been absorbed in writing off depreciation of plant and subsequent losses during the reconstruction period. The result is that our assets now stand at a proper figure."

*Sir W. Carey.*—The block of the mills has been written down in spite of the money that has been put into them out of the reserve, and they are still kept at a figure which is a very fair valuation. You can get that value for the mills to-day.

*Mr. Ginwala.*—What you mean is that you have practically brought it down to the break up value or the scrap value?

*Sir W. Carey.*—Yes.

*Mr. Ginwala.*—Then all these Rs. 30 lakhs you have lost in these two years. I take it that the total reserve fund of Rs. 30 lakhs has been exhausted?

*Sir W. Carey.*—It has been written off against the losses which were incurred during renovation. I am speaking of the cash losses.

*Mr. Ginwala.*—You say "This was built up from the surplus profits during War years and has since all been absorbed in writing off depreciation of plant and subsequent losses during the reconstruction period." I want to separate the two.

*Sir W. Carey.*—They are, of course, the same. The depreciation of plant referred to here is the writing down of the bamboo mill plant to the present mill.

*Mr. Ginwala.*—There is no bamboo mill plant here?

*Sir W. Carey.*—It is in Burma.

*Mr. Ginwala.*—What are these losses you are referring to?

*Sir W. Carey.*—The total loss on the 30th September 1923, which was the closing period for the last published account, was Rs. 26,99,000. That is the actual cash loss.

*Mr. Ginwala.*—On the business?

*Sir W. Carey.*—On the working of the mill.

*Mr. Ginwala.*—It is great deal more than that. What is this plant that you are talking of?

*Sir W. Carey.*—That was the plant which was purchased for preparing bamboo pulp in Burma.

*Mr. Ginwala.*—What was its original value?

*Sir W. Carey.*—Rs. 33 lakhs.

*Mr. Ginwala.*—What has it been written down to?

*Sir W. Carey.*—Rs. 15 lakhs. These Rs. 18 lakhs came from the reserve.

*Mr. Ginwala.*—You have got your assets?

*Sir W. Carey.*—We have; we have the mill, we have the plant which is waiting.

*Mr. Ginwala.*—Have you separated the two? Are you treating it as a separate business?

*Sir W. Carey.*—Absolutely. We are keeping that plant for erection if at any time we can float a company.

*President.*—Is it included in the block?

*Sir W. Carey.*—No; perfectly separate.

*Mr. Ginwala.*—You spent 33 odd lakhs on that?

*Sir W. Carey.*—Yes.

*Mr. Ginwala.*—What puzzles me is this. I take your 33.22 lakhs, that is the asset belonging to this business, isn't it?

*Sir W. Carey.*—Yes.

*Mr. Ginwala.*—In determining your capital account or your block value, are you going to debit this with that figure because those are assets that you have still got?

*Sir W. Carey.*—Yes, we still have them. It has been kept separate on purpose.

*Mr. Ginwala.*—This was taken out of profits?

*Sir W. Carey.*—Yes.

*Mr. Ginwala.*—It was not taken out of debentures?

*Sir W. Carey.*—No.

*Mr. Ginwala.*—I think it would be just as well if you had mentioned it in your assets.

*President.*—It is not really capital contributing to the output of the Titaghar Company. Therefore it is not really a part of the block with which we are actually interested.

*Sir W. Carey.*—That is so.

*Mr. Ginwala.*—But I think it is just as well to get all the correct figures.

*Sir W. Carey.*—You will find these in the published accounts.

*Mr. Ginwala.*—Did you write that off in one single year?

*Sir W. Carey.*—Yes.

*Mr. Ginwala.*—That bamboo plant is a 10,000 ton plant?

*Sir W. Carey.*—Yes.

*Mr. Ginwala.*—Is it complete?

*Sir W. Carey.*—Practically complete. Some of it is in Burma and some here.

*Mr. Ginwala.*—Does it include a chemical plant?

*Sir W. Carey.*—Yes, partly.

*Mr. Ginwala.*—Then haven't you written down too much?

*Sir W. Carey.*—We have written it down to 16 lakhs.

*Mr. Ginwala.*—That is £100,000 or little more than that.

*Sir W. Carey.*—In addition to that we have two mill sites, one in Rangoon, and one up the Pegu River. They are probably worth 3 or 4 lakhs of rupees.

*Mr. Kale.*—Why were you not able to pay your dividends in 1914, 1915 and 1916? Were there any special circumstances?

*Sir W. Carey.*—It was chiefly owing to foreign competition, very strong German and Scandinavian competition.

*Mr. Kale.*—Have you not been able to set aside what they call a dividend equalization fund?

*Sir W. Carey.*—We put aside a general reserve and development fund.

*Mr. Kale.*—I find that you have spent all these funds on developments and renovations. Would it not have been better if you had set aside a few lakhs on that account?

*Sir W. Carey.*—Even as it is we are not able to find money to do what we would like to do, that is to carry on developments, and unless we had developed in the way we have done, we should undoubtedly have not been in a position to reduce our cost to a carrying on figure.

*Mr. Kale.*—The impression one gets is that for 5 or 6 years you made profits and paid handsome dividends, but the moment you failed to make a profit you stopped paying dividends. I have not been able to understand this policy, namely, while in times of prosperity you were paying 50 per cent. and 55 per cent., the moment you fail to make a profit, you are not able to pay a dividend and then you ask for protection, that is the general impression. If you had been more far-sighted you would have set aside a fund so that for two or three years in succession you would be able to pay, if not 50 per cent., at least 6 or 7 per cent. and you would have been able to carry on.

*Sir W. Carey.*—The Managing Agents are not entirely the masters in this matter.

*Mr. Kale.*—Did the Managing Agents put this to the shareholders and did they reject it, or also were you carried away like the shareholders?

*Sir W. Carey.*—At that time the shareholders' complaint was that they were getting only 50 per cent.

*Mr. Kale.*—But don't you yourselves think that it is desirable to set aside a fund like that, so that for one or two years you might tide over a period of depression?

*Sir W. Carey.*—Yes, I think it is desirable.

*Mr. Kale.*—Then as regards the writing down of the bamboo plant, I expected that if the plant was a part of the concern taken as a whole, you should have shown it in your accounts as you had been using money out of the profits made from the concern. Your accounts do not give us a clear idea of the position of the mills taken as a whole.

*Sir W. Carey.*—I can say with regard to the figures that I have given in our written reply that it is so. Of course it is not quite clear in the published accounts.

*Mr. Ginwala.*—Why do you call this depreciation that you have written off Development Reserve?

*Sir W. Carey.*—It was made out of the development reserve.

#### IX.—COST OF PRODUCTION.

*President.*—Coming on now to the question of the cost of production, will you please tell us whether you still adhere to your original intention to treat this as confidential. It is very desirable, if possible, that it should be

published, and it is almost vital that the total works cost should be published. I don't see how we could make any recommendation except on the basis of the works costs.

Sir W. Carey.—You say that the Bengal Paper Mills and the Indian Paper Pulp Company have agreed?

President.—Both have agreed to the publication of their figures?

Sir W. Carey.—All their costs in particular detail?

President.—Yes.

Sir W. Carey.—In that case I should fall in line with them.

President.—We are much indebted to you.

President.—In Form II—this also applies to Form III—I see from your system of accounting that you don't distribute the miscellaneous and supervision charges.

Mr. Wood.—No.

President.—You practically treat them as overhead?

Mr. Wood.—Yes.

President.—One of the points I wanted to ask was this. In the supplementary statement\* which you have handed in you give a certain figure as your works cost. For instance, you say for the year 1923-24 your works cost is 3.86 annas. Does that include these miscellaneous charges?

Mr. Wood.—It does.

President.—The works cost there is used in the same sense in which we use it?

Mr. Wood.—Yes. It includes everything except depreciation.

President.—We don't include that in the works cost. This shows that in 1923-24 the cost of unbleached pulp is Rs. 269 a ton.

Mr. Wood.—Yes

President.—In order to make a fair comparison with the cost of purchased pulp, you have got to add a proportionate share of these miscellaneous charges and you have also got to add the overhead. If you are to make a fair comparison of the cost of pulp which you manufacture with the price of the imported pulp, you have to add a good deal to this figure of Rs. 269.

Mr. Wood.—I should not say a good deal.

President.—That seems to me *prima facie* to be low, having regard to the not suggesting that you ought to keep your accounts in a different way. I quite understand why you don't consider it worth while to distribute these miscellaneous charges. Nevertheless for our purpose some attempt at an approximate estimate has to be made. We have got to add to your figure of the cost of unbleached pulp some share of these miscellaneous charges included in the works cost and also of the overhead charges. Can you suggest the percentage which in your opinion would be a fair estimate?

Mr. Wood.—Our own cost is Rs. 50 just now.

President.—Never mind what the amount is. Can you get it in the form of percentage?

Mr. Wood.—We consider that 25 per cent. is a fair estimate.

President.—That seems to me *prima facie* to be low, having regard to the works cost of pulp compared to the works cost of finished paper. Even without these charges it is Rs. 269, whereas the cost of finished paper including the miscellaneous charges, etc., is Rs. 540 which is more than half to start with. So any addition to that means that more is going in. However I do not want to waste time over it.

Are you proceeding on an estimate of what the plant for making pulp costs as compared with the plant for making paper. On what basis did you arrive at 25 per cent.?

\* Statement III.

*Mr. Wood.*—Simply to arrive at a percentage of unbleached pulp it is the very beginning of things and is hardly necessary at all.

*President.*—Rs. 155 is the cost of materials and Rs. 140 is cost above materials?

*Mr. Wood.*—Yes.

*President.*—The cost above materials is not very heavy, I see.

*Sir W. Carey.*—We have not put any power on to that at all.

*Mr. Ginnala.* You have not sold pulp at any time?

*Sir W. Carey.*—No.

*President.*—What would be the addition to be made if you add 2½ per cent. of the miscellaneous charges?

*Mr. Wood.*—Rs. 12-8-0 for overhead and miscellaneous charges.

*President.*—That would bring your cost for 1923-24 to Rs. 285?

*Mr. Wood.*—Yes.

*Sir W. Carey.*—In 1923-24 the actual cost of purchased pulp was Rs. 300. Of course to-day it is lower.

*President.*—I was comparing this figure with the figure you gave us as the cost to-day.

*Sir W. Carey.*—I have explained earlier that it is on a partial year's working. It is not a full year's working.

*President.*—Was it in 1923-24?

*Sir W. Carey.*—Yes. The mills were still finishing their renovations and at the close of the season we had stocks of grass in the mills as well as in the fields. So we were unable to work the fields in 1924, that is to say, we did not have a full year's working. We have now cleared our stock. At the end of October we expect to have no stock in the mills. We have none in the fields. The cost of grass will come down gradually.

*President.*—On the royalty and other things?

*Sir W. Carey.*—Yes.

*President.*—The labour charges won't vary very much?

*Sir W. Carey.*—No, the average will not come down very much.

*President.*—At the present moment what is the cost of purchased pulp?

*Sir W. Carey.*—It is Rs. 237-8-0.

*President.*—Turning now to Form III, what quantity of unbleached pulp are you taking to get a ton of bleached pulp?

*Sir W. Carey.*—15 per cent. or Rs. 115.

*President.*—I worked it out at Rs. 117 and odd. That is the pulp which you yourself manufacture. The cost of purchased unbleached pulp is Rs. 318-9. On what price is that based?

*Mr. Wood.*—On Rs. 300 a ton.

*President.*—That would mean a loss of only 6 per cent.?

*Mr. Wood.*—Yes. Rs. 300 is the average price. I may be slightly less. I am not quite certain. We have got to take a certain month or a certain period.

*President.* You don't keep any records showing the amount?

*Mr. Wood.* No.

*President.*—My difficulty will be this that, if your Rs. 318 must be based upon the price of Rs. 300, then your loss in the process of bleaching is only 6 per cent. in the case of purchased pulp, whereas it is 17 per cent. in the case of the manufactured pulp.

*Mr. Wood.*—I cannot say positively that it is Rs. 300. It may be something less.

*President.* After all, these calculations of cost are only approximate.



*Mr. Wood.*—Yes.

*President.*—Can they be taken as the actual figures for the year?

*Mr. Wood.*—Yes.

*President.*—Your final result in Form IV, I take it, is your actual cost?

*Mr. Wood.*—That is actual expenses.

*President.*—Let us go back to Form III. You told us that the figure Rs. 269 should be raised to Rs. 285 by the addition of overhead. At what price must the purchased pulp be so that it is exactly on the same level as the price of the pulp manufactured by you. The idea is that the two ought to be on the same level. There must be no advantage in using the one or the other. If the manufactured pulp is Rs. 285, what is the corresponding figure for the purchased pulp? It would be better to have it in sterling.

*Mr. Wood.*—£17-10-0.

*President.*—You expected that the price of imported pulp would be about that. Do you still expect that?

*Mr. Wood.*—We do.

*President.*—Apparently on this basis you are pretty nearly at the figure for the purchased pulp.

*Mr. Wood.*—Yes.

*Sir W. Carey.*—Also we are anticipating next season to improve considerably.

*President.*—Now looking to Form IV as compared with the following two years, viz., 1922-23 and 1923-24, apparently you changed your practice, that is to say, you used a good deal more of the manufactured pulp than of purchased pulp.

*Sir W. Carey.*—That is so.

*President.*—With a big reduction in the total cost?

*Sir W. Carey.*—Yes.

*President.*—Am I right in inferring that you were using less manufactured pulp? Is it merely a drop in the price that induced you to change your practice?

*Sir W. Carey.*—I think that it is improvement in the process as well. We can boil more grass now.

*President.*—You are now using more grass and less purchased pulp?

*Sir W. Carey.*—Yes.

*President.*—Comparing with the pre-war figure, your costs are almost exactly double. That would naturally suggest that you ought to be able to get your costs down lower if you are to compete with imported paper. It certainly does seem that the cost of manufactured pulp has gone up out of proportion to the increases in the cost of other manufactured articles.

*Sir W. Carey.*—The cost has risen enormously and has now come down again.

*President.*—Taking the various elements of the cost of grass: by how much have railway freight gone up?

*Sir W. Carey.*—Until this last reduction, I should think that the increase in the long distance traffic was something like 80 per cent. and it has come back to about 50 per cent. On short distance traffic I should think that the increase must have been about 30 to 40 per cent. and it has now come back to very nearly what it was before the war.

*President.*—Do you mean the freight on short distance traffic on raw materials?

*Sir W. Carey.*—Yes. I am speaking from memory. If you wish we can check these figures.

*President.*—Then as regards auxiliary raw materials, what is the main cause for the drop in the price?

*Sir W. Carey.*—It was largely due to the fact that 1923-24 was a normal year. Neither 1921-22 nor 1922-23 was a normal year.

*President.*—You are making some of your own chemicals?

*Sir W. Carey.*—Yes.

*President.*—Apart from that, had you any fall in the price of other chemicals you use?

*Sir W. Carey.*—Yes. There has also been a drop in the price of many other things like waste paper.

*Mr. Ginnab.*—How can you have rags and waste paper at the paper stage?

*Sir W. Carey.*—I am afraid it is wrong.

*President.*—You mean form II is purely grass?

*Mr. Wood.*—Yes.

*President.*—Do you actually make pulp at times out of nothing but grass?

*Mr. Wood.*—Yes.

*President.*—In form IV do the auxiliary materials include cost of making pulp out of rags and so on?

*Mr. Wood.*—Yes. Rag and other materials are not in 'auxiliaries' in form III.

*President.*—Are they included in form I?

*Mr. Wood.*—Yes.

*President.*—How do you get the figure for the cost of manufacture of your bleached pulp: it includes pulp manufactured from rags?

*Mr. Wood.*—Form IV is the total expenses taken from our actual balance sheets divided by the number of tons made during that period.

*President.*—You do not keep your accounts so as to get a figure for manufactured pulp. How do you get this figure which includes pulp made from other things than grass?

*Mr. Wood.*—We do not put it in a form. We have got independent costs of them in the department. We do not incorporate them in the cost form in the same manner as we have done in the case of grass because they are very small items. Form IV shows what it cost us to manufacture paper from purchased pulp and grass, etc.: Forms I and IV are the same form—one is the cost per ton and the other shows the total expenses.

*President.*—You mean they can be connected item by item?

*Mr. Wood.*—Yes.

*President.*—If I divide Rs. 14 lakhs by the outturn of the year I should get Rs. 111. in the case of the primary raw materials. In that case the first item in form IV has to be called 'primary raw materials'?

*Mr. Wood.*—Yes.

*President.*—What is this mysterious item in No. 9 "any other single item not enumerated above. . .?"

*Mr. Wood.*—Brokerage and commission not connected with manufacturing costs.

*Mr. Ginnab.*—What happens to it in form IV?

*Mr. Wood.*—It is not works costs.

*President.*—If you leave it out in the expenditure, then you ought to compare your costs with the net price. On the other hand you treat selling charge as expenditure?

*Mr. Wood.*—It is more than selling charges.

*President.*—I take it that the permission you have given to publish your figures extends also to the supplementary memorandum? It is very important because it shows that your works costs are steadily going down.

*Sir W. Carey.*—If you think it is essential part of the application?

*President.*—I think it is important.

*Sir W. Carey.*—On that understanding we have no objection.

*President.*—What have you included to get from your works cost to the total costs? Look at the supplementary memorandum.

*Sir W. Carey.*—Head office charges.

*President.*—All I want to know is whether agents' commission has been included.

*Sir W. Carey.*—No.

*President.*—How do you arrive at it when there is no profit?

*Sir W. Carey.*—There is a minimum commission of Rs. 2,000 a month. The rest is commission on profit only.

*President.*—How do you get the figure?

*Sir W. Carey.*—It is simply an office allowance.

*President.*—Your return on capital, is it based on Rs. 130 lakhs?

*Sir W. Carey.*—Yes. At 8 per cent.

*President.*—And the depreciation that you have given is on the basis of the Rs. 3 lakhs?

*Sir W. Carey.*—We take it on the income-tax allowance. But at present depreciation is not very urgent because we have already written the mills down so very largely.

*President.*—I want to know whether this depreciation is based on the Rs. 3 lakhs, which the income-tax people are allowing.

*Sir W. Carey.*—Yes.

*President.*—It is satisfactory to notice that your total cost for the last three months has been less than the average selling price. Are these gross prices?

*Sir W. Carey.*—This is after paying all commission.

*President.*—Have you included in your selling charges selling agent's commission?

*Sir W. Carey.*—This is a net figure after deducting the agent's commission.

*President.*—Does it appear in the total cost?

*Sir W. Carey.*—No. It takes the form of a discount in the sales bill.

*Mr. Ginwala.*—In form I, you have got the total cost of the raw materials at Rs. 17 lakhs and purchased pulp at Rs. 16 lakhs. They are really half and half. On these figures there would rather be an objection to the claim for protection, for you are using nearly half of imported pulp for your manufacture. Therefore it is essential that you should eliminate that from your raw materials altogether and get the works cost on your natural raw material, grass, etc. On that basis I want to get at the works cost. The trouble is that in form II you have put in rags and other things in the auxiliary raw materials.

*Sir W. Carey.*—Only grass.

*Mr. Ginwala.*—That is right. The figure Rs. 350 that you have got in form IV (b) is on the basis of Rs. 269 unbleached in form II, and Rs. 352 for bleached pulp in form III?

*Sir W. Carey.*—Yes.

*Mr. Ginwala.*—That Rs. 350 is near enough, but what I cannot understand is that you use so much more grass that you reduce the cost of above materials—see form IV (a). You must treat these two items as one—the total being Rs. 223. The total cost per ton is Rs. 540. Now look at form IV (b).

*President.*—A great deal of these various costs—mill labour, auxiliary materials and so on—has gone into the manufacture of pulp.

*Mr. Ginwala.*—In form IV (a) and (b) these auxiliary raw materials are only chemicals?

*Sir W. Carey.*—Yes.

*Mr. Ginwala.*—I cannot make a comparison as to what is going to happen when you use your own pulp.

*Sir W. Carey.*—Form IV (b) will give you that.

*Mr. Ginwala.*—I cannot make out where the economy or expenditure is coming in in that case? What I wanted to know was the effect of your having to use your own pulp. You can make paper from grass only without using rags, can't you?

*Sir W. Carey.* Yes.

*Mr. Ginwala.*—And you do make that?

*Mr. Wood.*—No, very seldom without something in it.

*Mr. Ginwala.*—When you do not use imported pulp?

*Mr. Wood.*—Quite so.

*Mr. Ginwala.*—All I wanted to know was, what was going to happen.

*Mr. Wood.*—In Form IV (b) we have not put in any charges for clay. In ordinary practice we use clay to make up the loss. We have not included any loss.

*Mr. Ginwala.*—That was what I was going to ask you. You have used considerably more pulp.

*Mr. Wood.*—We have put in the pulp and taken off the chemicals.

*President.*—Does that make it more expensive? This price is a bit too high in practical working.

*Mr. Ginwala.*—It works out to Rs. 69 a ton for grass.

*Mr. Wood.*—Yes.

*President.*—According to the figures given by Sir W. Carey, the price of grass would be Rs. 54 a ton, at the mills.

*Mr. Wood.*—Quite so.

*President.*—And you take 2½ tons, that makes it Rs. 122 roughly?

*Mr. Wood.*—Yes.

*President.*—Last year your actual figure was Rs. 60 a ton. You must have been using 2½ tons. The figure you have given here is Rs. 155, that is, just 2½ tons which means about Rs. 60.

*Mr. Ginwala.*—If you take 2½ tons at Rs. 51 it comes to Rs. 122½.

*Mr. Wood.*—Yes.

*Mr. Ginwala.*—On that basis you can reduce that figure of Rs. 269 by nearly Rs. 30, so that it would be Rs. 239 unbleached and it will go on diminishing in proportion.

*Mr. Wood.*—We anticipate getting grass about 7 rupees cheaper, at about Rs. 22 in the end. 3 tons of grass give 1 ton of paper, that is Rs. 21 to Rs. 22.

*Sir W. Carey.*—Rs. 7 a ton of grass would give Rs. 21 a ton of paper.

*Mr. Ginwala.*—Then this estimate of Rs. 599 comes down to Rs. 577?

*Mr. Wood.*—Yes.

*Mr. Ginwala.*—You will be still worse off in that case also by Rs. 37 a ton compared with what you are now.

*Mr. Wood.*—Exactly, but we have reduced our costs from Rs. 269 to Rs. 241 which makes a difference.

*President.*—That will affect equally the estimate of cost of paper made from all materials and paper made from grass.

*Mr. Wood.*—We may improve the process and save the chemicals.

*President.*—I think you understand now what Mr. Ginwala is aiming at. You might, if you like, reconsider the form. I do not know whether we can assume that you knew what purpose it would be used for.

*Sir W. Carey.*—You are really trying to make a comparison between paper made from grass as opposed to paper from imported pulp?

*Mr. Ginwala.*—Yes. In that case if you are really using rags to give some chemical property, then you are right in calling it an auxiliary raw material, but if you are making paper from rags then it becomes a primary raw material.

*Sir W. Carey.*—I think we have come to an understanding. Rags, waste paper, hemp, etc., are all to be considered as primary.

*Mr. Ginwala.*—Then you will work out that form on your actual experience as far as you have got it now. Then of course you have told us that you expect economies in other directions. You have mentioned somewhere that there would be a reduction of 10 or 12 per cent. From the supplementary statement that you have put in, I see that there is going to be a reduction of half an anna, that is about 12 per cent. really, but what I want to know is where the reduction is going to come in. It may be fuel.

*Sir W. Carey.*—We anticipate a reduction in the total consumption of coal because we have a new plant since July.

*President.*—I think what Mr. Ginwala would like to have is, as far as you can give it, a comparison of your last figure for June with the figure you think you will get down to, showing that owing to improvement in coal consumption there will be a reduction of so much, and for some other reason it would be so much. Would that be possible at all?

*Sir W. Carey.*—We will do our best to give it. There are several improved devices actually: for reduction in labour, getting back waste and making it into paper, and that sort of thing which are gradually coming into force.

*Mr. Ginwala.*—You will give us those for 1923-24 on that basis. Then you can give your figures for June 1924 on the same basis, and this revised form as to what economies you still anticipate and then you can explain in a short note at the bottom that this is due to so and so.

*Sir W. Carey.*—May I ask you what is the importance of our giving this detail?

*Mr. Ginwala.*—To enable us to determine what measure of protection will be necessary, if it is granted.

*Sir W. Carey.*—You are trying to get a figure on grass as against one if we made paper from purchased pulp only?

*President.*—If that is the best you can give, let us have it on that basis. But I think Mr. Ginwala would like to know how the figures will be affected by the savings you are going to make.

*Sir W. Carey.*—Yes, I understand.

*Mr. Ginwala.*—On that grass basis what you have got as actuals and what you would get if economy is effected.

How do you allocate these various charges to your chemicals? Is it a rough and ready method of doing the thing or have you got a system?

*Sir W. Carey.*—These are actual charges. We get everything separate.

*Mr. Ginwala.*—You have not got a separate plant, for instance, for power and fuel. Have you got a separate plant altogether for power and fuel?

*Sir W. Carey.*—No.

*Mr. Ginwala.*—How do you charge that?

*Sir W. Carey.*—We keep separate records. This is all fixed up with the units used in the various departments as compared with the total expense in the department and the total power generated in the department.

*Mr. Ginwala.*—How do you get this figure for power and fuel for the recovery of soda?

*Sir W. Carey.*—We had got separate steam boilers for that department. We divided the total expense on steam boilers in that department and debited half the cost to this department and half to the Recovery department.

*Mr. Ginwala.*—At what rate would you charge the pulp, for instance, for this department?

*Sir W. Carey.*—10 cwt. of coal *plus* handling charges.

*Mr. Ginwala.*—At what rate will you charge for the caustic soda that you use in your unbleached pulp?

*Sir W. Carey.*—Actual cost of production.

*Mr. Ginwala.*—Is that what is given in this statement?

*Sir W. Carey.*—Yes.

*Mr. Ginwala.*—Do you give credit for the recoveries in these forms or in the other forms?

*Sir W. Carey.*—We don't show it here. We do not charge the recovery plant for anything that comes back from the digester.

*President.*—Only the nett cost is shown originally instead of showing the gross cost with the recovery later on.

*Mr. Ginwala.*—I see. How much do you recover?

*Mr. Wood.*—40 per cent.

*Mr. Ginwala.*—Don't you think that you ought to recover more?

*Mr. Wood.*—At present we are trying a new system, or rather we are improving our chemical consumption. We have, as a matter of fact, recovered 75 to 80 per cent. and, as Sir Willoughby Carey has just stated, we are at present working on an improved and more modern system which reduces the actual consumption of caustic.

*Mr. Ginwala.*—Without recovery?

*Mr. Wood.*—Yes. It gives less return in the recovery plant.

*Mr. Ginwala.*—Does not it mean that in that case the recovery plant is more expensive to use?

*Mr. Wood.*—You cannot take it away even if you get a more modern process.

*Mr. Ginwala.*—Supposing your process succeeds entirely, then you can do away with the plant entirely?

*Mr. Wood.*—We could do with a smaller plant.

*Mr. Ginwala.*—It may be that you do not want to recover, or there is something in the use of the recovery plant that enables you to save a good deal.

*Sir W. Carey.*—We have got an efficient recovery plant. We are getting into a more modern process.

*Mr. Ginwala.*—What are these figures you have given in the last form—total cost of bleach and so on?

*Sir W. Carey.*—That is our chemical plant.

*Mr. Ginwala.*—They do not give the cost.

*Sir W. Carey.*—Cost of bleach was Rs. 130 in 1922-23 and Rs. 160 in 1923-24.

*President.*—What are the details, cost of caustic or cost of bleach or for both?

*Sir W. Carey.*—Cost of both caustic and bleach.

*Mr. Ginwala.*—Your cost for 1923-24 was Rs. 116 for bleach and Rs. 123 for caustic. What was the price of the imported material?

*Sir W. Carey.*—In the first place we do not import any, but taking it from the Trade Review we find that the cost of bleach is Rs. 182.8 as against Rs. 116 and caustic soda Rs. 230 a ton.

## X.—MANUFACTURER'S PROFITS.

*Mr. Kale.*—You have been calculating a return of Rs. 130 lakhs. I wanted to ask you whether it was a fair way of doing it. After all, if you want to pay the shareholders in any industry, the fair way of doing it would be to allow for depreciation, interest upon your working capital, interest upon debentures and a reasonable rate of profit on capital?

*Sir W. Carey.*—Yes.

*Mr. Kale.*—I do not understand why you should calculate your return on the whole block value, that is, Rs. 153 lakhs.

*Sir W. Carey.*—We take 8 per cent. on Rs. 130 lakhs.

*Mr. Kale.*—I don't understand why you should take this block value rather than capital. Have the shareholders a right to expect anything after you have provided for everything? That is my point.

*Sir W. Carey.*—What we have taken is a fair over-all rate of interest. Interest has to be paid on the working capital. We say further down "Although a greater yield is naturally expected on ordinary shares, debentures, local and preference capital should require a lesser figure" and the difference there will make up on the comparatively small amount of ordinary shares. That is the line of argument we have taken.

*Mr. Kale.*—Your debentures amount to Rs. 30 lakhs?

*Sir W. Carey.*—Yes.

*Mr. Kale.*—And the ordinary and preference shares amount to about Rs. 26 lakhs?

*Sir W. Carey.*—Yes.

*President.*—Your general principle is that the capital can be raised at about 8 per cent.?

*Sir W. Carey.*—That is really the sort of line we took. We are taking only Rs. 130 lakhs, whereas the capital now employed in the business is Rs. 153 lakhs.

*Mr. Kale.*—You are including in that figure not only the debentures and the share capital but also something else?

*Sir W. Carey.*—We are including our losses which we have written off.

*Mr. Kale.*—Are you entitled to do that?

*Sir W. Carey.*—We have cut that off.

*President.*—What do you mean by the full capital employed in the business? Is that block value *plus* the working capital?

*Sir W. Carey.*—We have taken our block value and the stocks that we are obliged to carry in advance.

*President.*—Does this Rs. 1,58,28,000 include the working capital?

*Sir W. Carey.*—Yes.

*President.*—In which case you must cut out Rs. 70 lakhs. The balance is nothing like the replacement value of your block. What is the grand total of your balance sheet?

*Sir W. Carey.*—It is Rs. 1,53 lakhs. But we have deducted our losses.

*Mr. Kale.*—I don't know how you arrived at this figure.

*Sir W. Carey.*—We have only suggested Rs. 130 lakhs as a re-capitalisation of the Company.

*Mr. Kale.*—In that case you are not suggesting a particular rate on the basis of your actual figures?

*Sir W. Carey.*—No. We are only suggesting it as a re-capitalisation including the present capital.

*Mr. Kale.*—I thought that you were dealing with actual figures.

*Sir W. Carey.*—No.

*Mr. Kale.*—Suppose your actual figures were taken and your debentures, ordinary and preference shares and also the working capital were taken at 8 or 10 per cent., on that basis the return would be lower than what you have taken?

*Sir W. Carey.*—We have got to provide the working capital.

*Mr. Kale.*—Still the total will not be so much?

*Sir W. Carey.*—That is why we have taken it at Rs. 130 lakhs.

#### XI.—CLAIM FOR PROTECTION.

*Mr. Kale.*—You have drawn a comparison between the paper industry and the steel industry. But you have not taken into account the fact that in steel India has a special advantage of having an iron ore which is of superior quality to what you have in any other country. That kind of advantage you don't enjoy in India in the paper industry. There is no analogy between the paper and steel industries so far as raw materials are concerned.

*Sir W. Carey.*—The vast quantities of grass that we have are of very good quality and superior to wood fibres.

*Mr. Kale.*—Are they of superior quality to what they have in other countries?

*Sir W. Carey.*—As far as *sabai* grass is concerned, in quality it is very nearly equal in our view to other grasses like Esparto. Of course there is bamboo, but it has still to be proved. The assumption is that it is of very good quality. I mean that raw materials exist in the country.

*Mr. Kale.*—Quite true. But I want to draw your attention to the fact that India has no special advantage over other countries.

*Sir W. Carey.*—The advantage is in the fact that raw materials are in the country. All the raw materials necessary for the paper manufacture either exist or can be made in the country.

*Mr. Kale.*—That is quite true. But the superiority in that connection is not so great as to allow you to have higher costs in other items or other elements. That is my point.

*Sir W. Carey.*—That is so.

*Mr. Kale.*—As regards bamboo, it may be so; but we do not know.

*Sir W. Carey.*—At least we hope so.

*Mr. Ginnala.*—Supposing the Board comes to the conclusion that the future of the industry lies in the development of the bamboo pulp and bamboo paper, it must then surely work out figures on the bamboo basis. What have you got to say to that from that point of view? Supposing we recommend protection and we find that the bamboo proposition is better, then we must find what the cost of production is on that basis. If we base our recommendations on that, and the cost is very much lower, what have you got to say to that? It is a point which may arise. Of course we have not gone into the thing fully yet. Nor have we formed any opinion on that.

*Sir W. Carey.*—I take it, at any rate, that time would be given to the grass mills to change over.

*Mr. Ginnala.*—You accept that as a principle of our recommendations, apart from personal considerations, do you not? You would not expect us to make separate recommendations for grass paper?

*Sir W. Carey.*—I suppose not.

*Mr. Ginnala.*—In that case, you say you ought to have some time. How long would it take to replace your plant so that you can change over to bamboo?

*Sir W. Carey.*—A couple of years.

*Mr. Ginnala.*—That is not a very long time.



## Witness No. 5.

**India Paper Pulp Company, Limited, Calcutta.****A.—WRITTEN.**

*Statement I.—Original Representation of the India Paper Pulp Co., Ltd., dated 11th January, 1924, to the Tariff Board.*

We have the honour to enquire when we may have an opportunity of appearing before your Board to present our views on the subject of a Protective Tariff on paper and paper pulp imported into India.

We take this opportunity briefly to set forth the reasons upon which we base those views. Paper was originally made from rags and, when the supply of these became too small, wood and esparto grass were introduced successfully as materials for pulp making. It has long been realised that bamboo gives a fibre at least equal to that of the best wood or grass but, until we commenced manufacture, it had never been successfully used on a commercial scale anywhere in the world. After spending very large amounts on experimental work for over three years and surmounting great initial difficulties we have now been for 18 months manufacturing from our own bamboo pulp the highest grade of paper ever made in India and which compares favourably with English made papers. Both pulp and paper are made in a mill owned by an Indian Company from materials grown in India and by Indian labour.

During and since the war the output of European paper mills was developed very greatly to meet abnormal needs. In the last year or two the consumption abroad has fallen to normal or even below, with the result that a great surplus output is hanging over the paper market and many mills in Europe are dumping their surplus, at below cost, in India and other Eastern markets. They are able to do this because it is essential for their costs that full production be maintained even if part of same is sold at, or below cost.

In addition to the handicap of this dumping policy on the part of European manufacturers, we have to pay a high royalty rate to Government for our bamboo, and while in the past Government have promised to encourage the Bamboo pulp industry by practical assistance, this policy appears to have lapsed. Without such assistance, we, who are pioneers in a new Indian industry, are unable to compete with the old established European paper mills.

Bamboo pulp and paper manufacture is an infant industry and has never had the benefit of good times to put it on its feet and therefore has a much stronger claim on Government for help than certain other industries which were in a position to accumulate large reserves during the 'boom' years.

The duty which is now levied on imported paper does not in reality favour the Indian paper manufacturer. This is more than offset by the duty which the manufacturer has to pay on imported machinery and chemicals which are not at present obtainable in India and by the heavier capital expenditure incurred as compared with a mill in England. Further, imported pulp does not pay any duty at all, although it is really the manufactured article. We wish to emphasize the fact that paper pulp is not a raw material. Its manufacture is a long and expensive process, whereas the conversion of pulp into paper is comparatively simple.

If the Bamboo pulp and paper industry is enabled to expand, this will, as a natural consequence, result in the opening up of areas which are at present unproductive and to the development of allied chemical industries which will assuredly grow as the demand for their products increases.

If some encouragement of a practical nature is not received, we consider it extremely doubtful whether pulp and paper making in India from Indian bamboo

can be carried on at all. In the report presented in 1919 by the Special Committee appointed through the Secretary of State for India, it was recommended that the manufacture of paper pulp should receive every encouragement from the Government of India and that steps should be taken to render India independent of foreign supplies of pulp and paper.

The only Indian source of fine papers is Bamboo pulp. Any fine papers, other than ours, manufactured in India are made from imported pulp as it is not possible to make them from Indian grass pulp.

We therefore feel most strongly that we have a moral claim to protection in this industry and that a substantial duty should be imposed say of 30 per cent. on pulp and paper imported into India.

We shall be glad to have the opportunity of presenting our views in this connection more fully to your Board when opportunity is afforded us.



सत्यमेव जयते

*Statement II.—Copy of Representation of the India Paper Pulp Company, Limited, dated 23rd January, 1924, to the Government of India, Department of Commerce.*

We have applied to the Tariff Board for a hearing on the subject of protection of the paper and pulp industry in India and have been informed by them that this question has not at present been referred by the Government of India to the Tariff Board for enquiry and that we should forward our application to the Commerce Department, which we are, therefore doing.

Our object in making this application is to urge that protection should be afforded to the paper and paper pulp industry in India and we take this opportunity briefly to set forth our reasons for doing so.

Paper was originally made from rags and, when the supply of these became too small, wood and esparto grass were introduced successfully as materials for pulp making. It has long been realised that bamboo gives a fibre at least equal to that of the best wood or grass but, until we commenced manufacture, it had never been successfully used on a commercial scale anywhere in the world. After spending very large amounts on experimental work for over three years and surmounting great initial difficulties we have now been for 18 months manufacturing from our own bamboo pulp the highest grade of paper ever made in India and which compares favourably with English made papers. Both pulp and paper are made in a mill owned by an Indian Company from materials grown in India and by Indian labour.

During and since the war the output of European paper mills was developed very greatly to meet abnormal needs. In the last year or two the consumption abroad has fallen to normal or even below, with the result that a great surplus output is hanging over the paper market and many mills in Europe are dumping their surplus, at below cost, in India and other Eastern markets. They are able to do this because it is essential for their costs that full production be maintained even if part of same is sold at, or below cost.

In addition to the handicap of this dumping policy on the part of European manufacturers, we have to pay a high royalty rate to Government for our bamboo, and while in the past Government have promised to encourage the bamboo pulp industry by practical assistance, this policy appears to have lapsed. Without such assistance, we, who are pioneers in a new Indian industry, are unable to compete with the old established European paper mills.

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If the bamboo pulp and paper industry is enabled to expand, this will as a natural consequence result in the opening up of areas which are at present unproductive and to the development of allied chemical industries which will assuredly grow as the demand for their products increases.

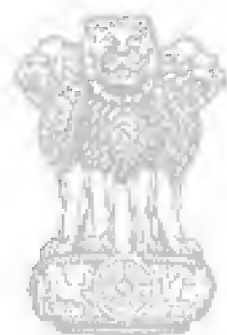
If some encouragement of a practical nature is not received, we consider it extremely doubtful whether pulp and paper-making in India from Indian bamboo can be carried on at all. In the report presented in 1919 by the Special Committee appointed through the Secretary of State for India, it was recom-

mended that the manufacture of paper pulp should receive every encouragement from the Government of India and that steps should be taken to render India independent of foreign supplies of pulp and paper.

The only Indian source of fine papers is Bamboo pulp. Any fine papers, other than ours manufactured in India are made from imported pulp as it is not possible to make them from Indian grass pulp.

We therefore feel most strongly that we have a moral claim to protection in this industry and that a substantial duty should be imposed say of 80 per cent. on pulp and paper imported into India.

We shall be glad to have the opportunity of presenting our views in this connection more fully to the Tariff Board when opportunity is afforded us.



सत्यमेव जयते

*Statement III.—Replies to questionnaire submitted by the India Paper Pulp Company, Limited, dated 23rd June 1924.*

We now send you under registered cover one copy of our reply to the Board's questionnaire. The remaining five copies required by the Board are being sent by ordinary post and we trust same will reach you by the 25th instant, which, we understand, is the date when replies are required.

## REPLIES TO QUESTIONNAIRE.

### I. INTRODUCTORY.

1. The India Paper Pulp Co., Ltd., was registered and incorporated as a Private Company on the 4th April 1918.

2. Being a Private Company, we are not at liberty to disclose details of the holdings. We may state, however, that the capital is entirely Rupee and that the intention has always been to make the Company a public one inviting participation from Indian shareholders and Directors, this having been the policy of the Managing Agents Firm for half a century. It has not been possible, however, to carry out this policy to its full extent owing to difficulties encountered in bringing the Company to its present stage of production whereby the Company spent much more than its original capital and extra money has been lent by the Share-holders and Managing Agents.

There are no Directors, same not being obligatory for a Private Company.

Two Indians are connected with the superior management, and it is hoped to increase this proportion as the Company and technical skill of Indian employees develops.

3. We manufacture both pulp and paper, but at present the pulp manufactured is entirely for our own paper making requirements.

4. We commenced manufacture commercially in April 1922.

5. (a) Capacity for Pulp is 200 tons per month.

(b) Capacity for Paper is 240 tons per month.

6. Actual output of paper—

Year ending March 1923 . . . . .	1,793 tons.
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Year ending March 1924 . . . . .	2,435 tons.
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7. Mill is situated on the bank of the River Hooghly, at Hazinagar near Naihati, Eastern Bengal Railway, 30 miles from Calcutta.

(a) As to raw material area—Reasonably situated, but not ideally.

(b) As to coalfields—Reasonably adjacent.

(c) As to markets—Well situated, especially for coastal distribution and for possible export.

(d) As to labour—Well situated.

Other considerations—Plentiful supply of fresh water, close proximity to large engineering works where emergency repairs can be rapidly executed.

As to the most important factor in selecting the site, we consider it difficult, if not impossible, to give any one of the above considerations absolute preference. Certain conditions must be satisfied before a mill can be established, and the advantages and disadvantages must be collectively considered when choosing a site. The question of supervision has also to be taken into consideration.

8. We manufacture White Printings and Writings, Blotting, Unbleached and Toned Printings (Superior Badami), Antique Laid and Antique Wove

Azuro Laid and Coloured Printings. We have also produced lower grades such as Badami and Brown to meet market demands. (See reply No. 10).

Taking the past six months, the percentage of the total output is as follows :—

	Per cent.
White Printings . . . . .	38.14
Writings . . . . .	24.84
Blotting . . . . .	1.92
Unbleached, etc. . . . .	7.72
Antiquos . . . . .	5.37
Azure Laid . . . . .	.28
Coloureds . . . . .	.47
Badami, etc. . . . .	21.46
	<hr/> 100.00 <hr/>

On account of experimental manufacture, previous records would not be of value and in our opinion, future records will show increased percentage in all superior qualities to the exclusion of Badami and Brown.

9. A broad classification might be taken as under :—

Wrappings, newsprint, printings, white and coloured wood free including the various book papers, writings engine sized, writings tub sized, ledger paper, speciality papers.

The kinds of paper we normally manufacture would be classified as good. Our paper successfully competes with and is fully equal to English papers of the same grade.

Indian raw materials and Indian demand create most favourable conditions for the manufacture of white printings and coloureds, book papers, engine sized and ledger papers. Blotting paper of a good grade can be made from bamboo. Our mill is able to manufacture better class papers than other Indian mills from indigenous raw materials. It suits us to specialize in the highest grade papers.

10. We manufacture a much larger variety of papers than a manufacturer in a Western country would do.

The Indian bazar dealer's business is such that it is necessary for him to carry a good range of papers and he makes up his orders so as to include a proportion of each line which mills must be prepared to supply. For this reason, it is necessary for the Indian mill to be frequently changing the type of paper manufactured and consequently spoiling its production in order to supply bazar dealers' demands.

The Indian manufacturer is certainly at a disadvantage in this respect. He has another severe handicap to face on account of the very large proportion of light weight papers demanded in this country. The lowest weight of cream laid foolscap which an English mill will manufacture is 8 lbs. That is to say, a ream of 480 sheets weighs 8 lbs. In India, we have to manufacture a large proportion of 6 lbs. foolscap, i.e., 25 per cent. lighter than an English mill but the lighter weight does not command a higher price per lb.

11. The Sulphite Process.

Our Pulp is manufactured by a patented process which is a modification of the ordinary sulphite process as used in the manufacture of sulphite wood pulp. In the ordinary sulphite process, the wood is cooked with Calcium Bisulphite. We use Magnesium Bisulphite and there are various modifications in the cooking process.

## II. RAW MATERIALS.

## A. Primary.

12. The primary raw material used is Bamboo.

13. Annual requirement—

(a) about 5,000 tons. Output as per reply No. 6.

(b) according to output equivalent to full capacity of pulp plant 5,000 tons. Paper plant 6,250 tons.

The plant is of course capable of much extension and its final capacity depends very largely on the recommendations of the present Tariff Commission and their subsequent adoption.

14. Approximately 2½ tons bamboo are required for one ton of unbleached pulp.

15. About one ton unbleached pulp is required for one ton of furnished paper, but it varies slightly in different classes of paper.

16. The present bamboo forests in India and Burma are probably sufficient to supply the whole world's demand for pulp. As these forests can be worked on a three years rotation, the supply is practically inexhaustible. In this connection, we quote Mr. Wm. Rait, F.C.S., Cellulose Expert to the Government of India. A paper prepared by this gentleman was read to the Royal Society of Arts in 1921 and reported in the World's Paper Trade Review of May 13th 1921. The following is an extract:—

"It is, I think, a modest estimate to say that from bamboo taking only that which is available under possible manufacturing conditions, Burma, Bengal and South-West India, could produce Ten Million tons of pulp per annum, and Assam, from Savannah grasses Three Million. India could therefore produce pulp for the whole world."

We would also refer the Board to Mr. R. S. Pearson's (Forest Economist) article on "The Utilization of Bamboo for the manufacture of Paper Pulp," which describes several bamboo areas.

In addition to present forests, we do not see any reason why great tracts of more or less waste land could not be utilized for the cultivation of bamboo, with the idea of obtaining supplies from localities nearer the Hill or from places where transport by river in rafts would be more economical.

17. Our main supplies are drawn from our Bamboo Reserve in the Chittagong Hill Tracts.

The transport distance from our Reserve to the Mill is 470 miles.

18. The bamboos are cut on contract, floated down in rafts to the Company's crushing and baling plant at Jaitpura which is about 14 miles upstream of Chittagong on the Karnafuli River. After crushing and baling, the bales are boated to the Chittagong Jetties, whence they follow the usual combined route to the Mill at Naihati.

The distance covered by rafting is . . . . .	119 miles
By boating and steamer . . . . .	134 miles
By rail . . . . .	217 miles.
	<hr/> 470 miles. <hr/>

19. Particulars of Royalty will be found in the copy lease mentioned in reply No. 21.

20. The average cost per ton delivered at the Mill may be taken as Rs. 50, which we hope will be much reduced on a large scale of extraction following expansion of the present plant. The cost of reserve Bamboo varies according

to the quantity extracted which may increase or reduce overhead charges. Moreover, the development of the reserve in order to work up to the quantity required, necessitates abnormal expenditure which would not give a fair idea for criticism or comparison. Although there is plenty of bamboo available, the organization of collection on a large industrial scale can only be done at great cost to the pioneers.

We regret being unable to give detailed figures even if in confidence. Even though the information were not disclosed, it might possibly leak out and be of value not only to our competitors in this country, but also to those abroad.

We hope the fact that this Company having borne the heavy cost of experimental manufacture to prove the success of bamboo paper and hence to prove the advantage to the country mentioned in reply 29, will not be lost sight of by the Board.

21. A copy of our lease is enclosed. We consider that the terms are reasonable from the Government's point of view, but having consideration for the fact that the industry is an entirely new one, we think the terms could have been made on the basis of no Royalty for the first 7 years.

We know of two cases in Burma where the Government granted leases in the same year as our own, viz., 1920, the period being the same. No royalty is payable on either of these concessions for the first 7 years and afterwards royalty is based on Rs. 1 per ton on air dry unbleached pulp. Taking into consideration our reply No. 14, it will be seen that the cases cited have much more favourable concessions than ours, and considering the possibilities of the industry and the risks taken by us as pioneers, we consider the terms given us might have been as favourable.

22. We expect the quality of the raw material to remain constant as we have found it in the past.

23. We expect the quantity of raw material to increase as our reserve organization develops. Our reply No. 18 also bears on this question.

24. In view of reply Nos. 20 and 23, an answer is not required to this question.

25. Our supply of raw material is assured, practically in perpetuity. The Reserve area alone is approximately 470 sq. miles, and is dense with bamboo. In addition, we are also experimenting other sources of supply against the event of very large expansion taking place in our consumption.

26 & 27. We do not consume Sabai Grass.

28. We consider bamboo one of the world's finest paper making materials, and fully equal to the best wood pulp.

29. In view of our previous replies, we do not think there is any doubt whatever that this country possesses a large advantage due to the existence of its bamboo forests as compared with other countries.

30. Comparison of bamboo with Sabai :—

- (a) We believe the quantity of available Sabai Grass is limited and that its growth is restricted to certain localities. Bamboo is almost unlimited in quantity.
- (b) We are not in a position to speak as to continuity of supply of grass. Continuity of supply of bamboo, we believe, is quite assured.
- (c) We believe bamboo is more accessible than grass, and that it could be cultivated in close proximity to Mill.
- (d) We believe bamboo is cheaper than grass now, and we hope the cost of bamboo will be considerably reduced in the future, with increased extraction.

We believe the yield of paper from sabai grass is in the vicinity of 33 per cent. while the yield from bamboo is 40 per cent.

- (e) Bamboo pulp as manufactured by us is infinitely superior in quality to sabai grass.



With regard to the last paragraph, we do not feel that our experiment has gone far enough to make a comprehensive answer. We can safely state that pulp can be manufactured from practically any class of bamboo.

31. We have no real knowledge, but believe there are a few grasses other than sabai suitable for pulp manufacture, but we understand that the quantities available are unimportant.

32. We do not use rags, but the supply in India is limited and very poor in quality. To extend the supply would require an elaborate collecting organization, which would probably raise the cost above an economic level.

33. See reply No. 21.

34. (a) No.

(b) A small quantity of imported pulp is necessary for the present. We do not use imported pulp for making special papers. It is solely to obtain maximum output. Most of our supplies have been imported from Norway and prices have always been C.I.F. Calcutta. During the past 18 months the price has fallen from £19-10-0 to £14-10-0, Landing charges are Rs. 2-8-0 per ton, and transport to Mill Rs. 2-8-0 per ton.

35. While we have a concession rate for the importation of bamboo from the Reserve from the Railway and Steamer Companies, this item is a very heavy charge on the cost of our primary raw material. The concession rate first quoted us in 1919 was Rs. 7 per ton, whilst to-day it has risen to Rs. 8-7-0.

*B. Auxiliary.*

36. The chief auxiliary raw materials used by us and our annual requirements are as follows :—

Sulphur.

Magnesia.

Bleaching Powder 250 tons—about (varies according to quality of paper manufactured).

Rosin, 65 tons.

Alum, 150 tons.

China Clay, 270—300 tons.

Dyes, 14 cwt. 2 qrs. 4 lbs. Value Rs. 6,572-14-6.

Wires, 12 per annum.

1st Press Felts, 14 per annum.

Jackets Couch, 8 per annum.

Dryer Felts, 1 set.

Stores—value Rs. 1,10,000—Principal Items :—Belting Rs. 9,500,  
Oil Rs. 7,000.

37. (a) This does not apply.

(b) This can only be given confidentially.

38. (a) *Auxiliary Raw Materials imported from abroad.* Bleaching Powder, China Clay, Dyes, Wires, 1st Press Felts, Couch Jackets, Dryer Felts, Stores value Rs. 17,000 including Belting Rs. 6,232.

*Purchased in India though not manufactured here.* Sulphur, Mill Stores value Rs. 14,000 including Oil and Grease Rs. 6,984, Belting Rs. 3,312, Cotton Rope Rs. 3,775.

(b) *Manufactured and Purchased in India.*—Magnesia, Rosin Alum Stores value Rs. 78,955.

(c) *Manufactured by us from other materials.*—The only chemical which comes under this head is Magnesium bi-sulphite, the cooking liquor. This is manufactured from Sulphur and Magnesia. The manufacture of this chemical is an integral part of the process of our pulp manufacture and cannot be fairly

taken as a separate manufacture. In any case, there are no data from which a comparison could be made.

In the case of A, the country of origin is England with the exception of Dyes which are imported from Germany.

The port of importation is Calcutta in every case.

Other particulars required are as follows :—

## A.

	Price in sterling per ton.	Freight and Insurance.	Landing Charges and River Dues.	Transport Charges to Mill.	Custom Duty
	£ s. d.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Bleaching Powder . . . . .	10 1 3	45 9 1	1 2 0	3 13 0	37 8 0
China Clay . . . . .	3 12 3	20 1 9	2 10 0	2 7 10	12 12 0
Dye—Rhodamine . . . . .	451 0 1	65 0 11	23 8 5	..	797 15 11
Dye—Blue . . . . .	980 8 1	65 0 11	23 6 5	..	797 15 11
Wire . . . . .	46 3 10	21 0 0	0 15 9	0 8 0	16 10 0
Felt . . . . .	14 2 2	8 12 6	0 5 6	0 1 4	5 8 4
Jacket . . . . .	7 16 5	2 6 8	0 11 1	0 1 0	3 0 0
<i>Dryer Felt—</i>					
Cotton { 70 × 102 ea. . . . .	75 14 6	28 0 6	1 12 3	0 11 0	29 3 0
65 × 102 ea. . . . .	70 11 3	29 11 1	1 2 6	0 13 0	27 4 0
58 × 102 two . . . . .	125 4 7	43 11 8	4 2 0	1 1 0	48 3 0
Woolen { 41 × 102 ea. . . . .	54 13 3	20 10 1	1 0 6	0 8 6	20 5 1
26 × 102 ea. . . . .	34 16 2	18 1 9	0 10 8	0 5 6	12 14 11

## B.

	Manufactured by	Market Price.	Transport Charges to Mill.
		Rs. A. P.	Rs. A. P.
Sulphur . . . . .	Seltcan . . . . .	117 0 0	2 7 2
Magnesia . . . . .	Magnesite Syndicate, Ltd., Salem, Madras Presidency.	92 8 0	22 5 1
Rosin . . . . .	The Indian Turpentine and Rosin Co., Cawnpore.	211 2 0	35 7 0
Alum . . . . .	D. Waldie and Co., Konnagar	126 8 0	3 8 0

39. Bleaching Powder will certainly be manufactured by our Mill for our own use as soon as the paper making plant is sufficiently large to carry the expense of a bleaching plant. The electrolytic process would be used with salt as the base from which the bleach would be manufactured.

There are China Clay manufacturers in India, but in spite of repeated and extensive trials, their products have been found quite unsuitable for paper manufacture.

*Dyes.*—The manufacture of these is a highly specialised industry which we do not think is likely to be established in India.

*Wires.*—If the demand for wires becomes sufficiently large in India, we see no reason why this industry should not be established here.

*Felts and Jackets.*—Here again we see no reason why this branch of industry should not be established in India. It is simply a question of having a sufficiently large demand to justify the installation of the special plant required.

*Sulphur.*—This is not likely to be produced in India as was shown in the evidence placed before the Board in their recently completed inquiry.

*Dryer Felts.*—We do not think it likely that these will be made in India in the near future. The consumption is small and the manufacture is a specialised one in the hands of a very few people who have operated in this class of material for many years. However, should the industry grow sufficiently, we do not doubt that this also would follow and be established in this country, in the course of time.

*Belting.*—This is already being produced and we see no reason why belting should not be manufactured in this country to suit our requirements.

### III. LABOUR.

#### A Field Labour.

40. As the work is done through contractors, it is difficult to say the exact number of labourers employed in extracting and collecting raw material, but we should say it is at present between 800 to 1,000.

For reasons already explained in reply No. 20, we are unable to give details of wages. We may state, however, that in our own Reserve we spend approximately 1½ lakhs Rupees per Session on labour and that in the comparatively short time we have been operating the Reserve, the cutters prices have increased about 60 per cent.

41. We have had the usual labour difficulties in accustoming semi-civilized labour to a new industry. Ultimately, we hope to enjoy specially favourable conditions as regards labour, as we provide work for the local population who live largely by jhumming, at times of the year when they have no agricultural duties to attend to.

42. The labour is indigenous. Although we have not obtained all our requirement from the Reserve, we do not attribute this to shortage of labour. Our last two seasons have shown a decided improvement in outturn which we have every reason to believe will continue. We believe the labour is available in sufficient quantities and that it is only a matter of time to accustom same to our requirements.

43. No special training is required.

#### B. Mill Labour.

44. Our process being a new one, expert supervision is required, but efforts are being made and have to some extent been successful, to replace imported supervision by home trained.

45. We have only four non-Indians in the Mill: Manager, Engineer and two Machinemmen. We also have an Anglo-Indian assistant engineer.

The same staff would probably run a mill of double the capacity. At the outside one extra man would be required.

46. The Mill was started with the absolute minimum of European labour and everything possible has been done to keep to this. If the plant is increased, we hope to be able to run with the present staff of Europeans. All other labour is local.

It is anticipated that while the Indian workmen will become more expert, yet some European supervision will be required for a number of years.

Indian Workmen are given every facility to acquire training in skilled work. We have always a number of learners on the paper making machine, beaters and finishing house, and in fact, in every department of the Mill where skilled labour is required.

47. European labour obtains roughly about 50 per cent. above the average rate of wages which would be drawn in England by this class of workman, but in this connection, it must be remembered that only picked men are sent out here.

48. The total number of Indian workmen employed varies a little with the season, but average about 450.

Wages in the various classes are as under :—

- Head Mechanic, Rs. 190 a month.
- Head Shift mistries, Rs. 70 a month.
- Assistant Shift mistries, Rs. 60 a month.
- Fitters from Rs. 1-4-0 to Rs. 1-9-0 per day depending on qualifications.
- Turners and Planers, Rs. 1-6-0 to Rs. 1-10-0 per day depending on qualifications.
- Moulder, Rs. 60 a month.
- Head Carpenter, Rs. 70 a month.
- Carpenters, Rs. 1-6-0 to Rs. 1-12-0 a day.
- Head electricians, Rs. 60 a month.
- Assistant electricians, Rs. 50 a month.
- Switchboard Attendants and Motor Boys, 12 annas a day
- Pump men, Re. 1-0-0 per day.
- Oilers from Re. 1 to 12 annas per day.
- Head Firemen, Rs. 50 a month.
- Firemen, Re. 1 a day.
- Ash Coolies, 12 annas per day.
- Khalasis, Sirdar, Rs. 1-8-0 per day.
- Khalasis, 14 annas per day.
- Head Mason, Rs. 60 per month.
- Mason, Rs. 1-4-0 to Rs. 1-6-6 per day.
- Machinemmen, Rs. 70 per month.
- 1st Assistant Machinemmen, Rs. 28 per month.
- 2nd Assistant Machinemmen, Rs. 26 per month.
- 3rd Assistant Machinemmen, 14 annas per day.
- Boys, Rs. 14 per month.
- Cuttermen, Rs. 40 per month.
- Cutter Coolies, 14 annas a day.
- Cutter Boys, Rs. 14 a month.
- Head Finishers, Rs. 60 per month.
- Finishers, Rs. 28 to Rs. 25 per month.
- Beatermen, Rs. 60 per month.
- Assistant Boatermen, Rs. 1-8-0 a day.
- Coolies, 11 annas a day.
- Chemical House cooly, 14 annas to 15 annas a day.
- Washing plant coolies, 14 annas to 11 annas a day.
- Bleach tank coolie, 11 annas a day.
- Digester house fitters, Rs. 1-8-0 to Rs. 1-4-0 per day.
- Coolies from 10 to 14 annas per day.
- Acid Plant men, Rs. 1-2-0 to Re. 1 per day.
- Bamboo Crusher head coolie, 14 annas per day.
- Bamboo Crusher coolies, 11 annas a day.
- Outdoor coolies, Sirdar Rs. 48 per month.
- Outdoor coolies, Assistant Sirdar Rs. 40 per month.
- Outdoor coolies, Rs. 0-10-6 per day.

49. Our plant was not manufacturing in 1913-14.

For the year ending 31st March 1924, our wages bill amounted to Rs. 1,63,400 for Indian labour only.

Average rates are given in reply No. 48.

50. The Indian labour force is sufficient. This labour is mostly settled in the locality of the Mill though originally drawn from various parts of India.

51. Indian labour decidedly improves with training. It is hardly fair to compare a man who has been given a high class technical education with a man who starts as practically illiterate. If educated Indians were seriously to take up paper manufacture, we believe results would be most satisfactory.

52. We have built individual houses for our senior Indian staff and for the lower grades, lines have been built and supplied free of charge. We keep these lines clean and sanitary and provide our workpeople with an abundant supply of wholesome drinking water. We have a Mill Doctor and all workpeople and their families are attended and provided with medicines free of charge. We have had little time to do anything more as we are quite a new mill, but the care of our workpeople and their welfare is with us a very important consideration. Apart from this point of view, we consider we obtain much better work out of a well looked after and contented worker than if left to look after himself.

#### IV. POWER (INCLUDING FUEL).

53. Power used in the Mill is derived from electricity, except for the paper-making machine and several pumps which are steam driven.

The exhaust steam from the engine driving the paper making machine is used for drying the paper on the cylinders.

The electric power is obtained from a modern steam driven power station situated in the Mill.

The full capacity of our plant is 1,100 Kwts, A. C., 440 Volts, 3 Phase, 50 Periods per second. Consumption of power at present is only one-third of full capacity.

Operating cost (exclusive of capital charges) is 45 annas for K. W. hour. It is not known how this compares elsewhere, but in 1919 we believe the cost in various parts of England varied from 45 to 1.55 pence per K. W. hour exclusive of capital charges.

55. Coal is employed for steam power and is available in sufficient quantities.

56. We use approximately 4.25 tons of coal per ton of finished paper produced.

57. Coal is brought by rail from the Bengal coalfields a distance of 150 miles.

Price f.o.r. Colliery is Rs. 6-8-0 per ton.

Freight to Mill, Rs. 3-8-6 per ton.

58. While we do not control our sources of supply of fuel, yet the supply is assured many years to come.

59. We do not use wood fuel.

#### V. MARKET.

##### A. For Paper.

60. We can only estimate the present Indian production at 33,000 tons per annum.

61. (a) 93,000 tons.

(b) 83,000 tons.

62. We consider it likely that Indian demand will increase because we believe India is one of the present lowest consumers of paper per head of population. The consumption per head of newsprint alone in the United States of America is 50 lbs., whereas the consumption per head of all classes of paper in India is less than one lb. The development of the country and the spread of education must of necessity result in increased demand for paper. The use and demand for paper is one of the certain and most positive signs of a country's development.

63. Principal markets in India are:—

	Miles.
Calcutta—distance from Mill . . . . .	30
Allahabad—distance from Mill . . . . .	494
Delhi—distance from Mill . . . . .	884
Lahore—distance from Mill . . . . .	1,213
Cocanada—distance from Mill . . . . .	690

64. The question of distance does not give us any advantage. Allahabad, Delhi and Cocanada are practically the same distance from Naihati as from the Port of Calcutta. Lahore is 755 miles from Karachi as compared with 1,213 miles from Naihati.

65. The export of paper from India is probable at some future date to Australia and New Zealand and South Africa.

The chief demand we could supply would be for printing papers and engine sized writing.

It is impossible to give any estimate, but we might point out that during the quarter ending September 1923 Australia imported paper valued at Rs. 855,144, vide The World's Paper Trade Journal of 18th April 1924, page 1262. A large portion of this paper consists of qualities which might be manufactured in this country.

66. We were not manufacturing during the war period.

*Purchased by the Government  
of India, 1923-24.*

*व्यापक नयन Government of India, 1924-25.  
(Present Contract.)*

	Rs. A. P.		Rs. A. P.
20 tons Cream Laid . . . . .	0 5 2½ per lb.	40 tons Cream Laid . . . . .	0 4 4 per lb.
170 „ Unbleached . . . . .	0 3 10½ „	115 „ Cream Wove . . . . .	0 4 4 „
180 „ Badami . . . . .	0 3 6 „	250 „ Unbleached . . . . .	0 3 8 „
150 „ Brown . . . . .	0 3 0 „	60 „ White Printing . . . . .	0 3 10½ „
—	—	20 „ Duplicating . . . . .	0 4 4½ „
620 tons.	—	—	—

485 tons.

Eastern Bengal Railway, 1922-23, 100 tons White Printing . . . . .	0 4 3 per lb.
E. P. R. and O. & R. R., 1923-24, 3 tons Cream Wove . . . . .	0 5 2½ „
3 „ Blotting . . . . .	0 5 6 „
2 „ Blotting . . . . .	0 5 8 „
6 „ Superior Badami . . . . .	0 4 1½ „

14 tons.

These prices, however, included free delivery.

67. Our paper is not consumed by newspapers because our quality is too high for this class of business.

*B.—For Pulp.*

68. Emphatically yes. We claim that our pulp is superior to any produced in India and equal to the best European qualities, and in our opinion, is bound to have a ready sale.

69. We have as yet no arrangements for manufacturing pulp for sale, for, with the steamer companies giving every facility and manufacturing concerns in Europe landing pulp at what we understand is considerably below cost of manufacture, we have not thought our market sufficiently secure and free from unfair competition.

70. The pulp is imported on account of inadequacy of present supply which however is due to the fact that economic conditions make it possible for foreign manufacturers to land their material into this country at unremunerative prices. The uncertainty of the situation has prevented manufacturers in India laying out large sums of money for the development of the local resources and erection of expensive plants.

Previously a certain amount of wood pulp was imported for certain special qualities of paper. It is now possible to manufacture from bamboo pulp any paper that can be manufactured from wood pulp, the quality being equivalent.

We consider the present importations of pulp could be entirely replaced by pulp produced in India, particularly from bamboo. Indian Bamboo Forests possess a natural product in unlimited quantities of ideal raw material suitable for the manufacture of all grades of paper to meet the whole of India's internal demand, leaving surplus pulp available for export as mentioned in reply No. 72.

71. We estimate the present domestic market for Indian pulp at 10,000 tons.

The possible market is capable of almost unlimited expansion as the country develops.

The principal market in India is for sulphite pulp, and a small quantity of soda pulp. Sulphate and mechanical pulps are also imported. The latter is not an economical pulp to import, because it degrades the quality of the paper made without any compensating economy in production.

72. The export of pulp from India to foreign countries is undoubtedly probable in the more distant future provided the industry is protected.

Export is particularly probable to the Straits, South Africa, Australia and New Zealand. Certainly three of these countries have no paper industry at the moment and have not yet found a wood in sufficient quantity suitable for manufacture into pulp.

It is impossible to form an estimate and inadvisable to hazard an opinion as to kinds of pulp India might eventually be able to export.

## VI. FOREIGN COMPETITION—PAPER AND PULP

73. In regard to paper, competition is keenest from the United Kingdom, Norway, Sweden, Finland, Germany and Holland. We anticipate that competition will become keener from Germany as we believe it is this country's intention to give very low freights to exporters by German lines.

In regard to pulp, Norway, Sweden and Finland are the chief competitors.

74. Competition is particularly keen in white printings and writing.

75. The papers with which we have to compete are made from wood pulp and esparto grass. In some cases the papers contain a small percentage of mechanical pulp.

76 and 77. (i) We give below the lowest rates cabled in February 1924 by the Director-General, India Stores Department, London, for the Government of India tender, 1924-25. These figures were supplied by the Controller of Printing, Calcutta, and are therefore reliable. Although the duty has been calculated on the *ad valorem* value instead of on the tariff valuation, it will be noticed that an additional 5 per cent. has been added by the Controller which compensates for this difference.

	Rate per lb. in London.	Freight at £2.5-6 per ton on writing and £2 on printing papers.	Interest and Insurance at 15 per cent.	Duty at 15 per cent. plus 5 per cent.	Landing charges at Rs. 2d.	Total cost.	Exchange 1s. 4d.
	d.	d.	d.	d.	d.	d.	A. P.
Cream Laid & Wove	3-1	0-24	0-02	0-67	0-01	4-07	4 0-84
White Printing	2-9	0-21	0-02	0-62	0-04	3-78	3 9-18
Unbleached	2-4	0-21	0-02	0-52	0-04	3-19	3 2-28

(ii) Average prices obtained for our papers:—

Quality.	1922.	1923.	1924.
	Rs. A. P.	Rs. A. P.	Rs. A. P.
White Printing	0 5 3	0 4 5½	0 4 3
Cream Laid	0 5 4	0 4 11½	0 4 6

The rates are nett ex Mill. These prices refer only to bazar sales and not to contracts as reported in reply No. 66.

78. We do not consider Foreign Trade Journal quotations to be reliable so far as Indian importers of paper are concerned, and we have only considered such *bond fide* quotations as have been available from time to time.

Paper is probably exported below Trade Journal Prices, especially where firms have surplus stock to dump. In order to maintain full production and to keep down overhead costs, home mills are willing to manufacture for export even though it involves a small loss in order to maintain the prices in home markets.

It is impossible to say by what percentage the quoted price should be reduced.

79. See answer No. 78. So far as paper is concerned, the evidence on which we rely is the personal knowledge of home manufacturers with whom we are in contact.

Regarding pulp, a glance at any recent Trade Journal will show that the market is giving producers a good deal of anxiety and many mills in Scandinavia are running at a loss on the figures now prevailing.

80. Foreign competition is keenest in Bombay, Madras and Calcutta.

81. See answer No. 78. Dumping in India maintains the home prices. So far as we can tell, these causes are likely to continue for some time.

82. Foreign imports are invariably made on a c.i.f. Indian port basis. Sea freight therefore does not apply when comparing freights payable by importers to reach the various Indian markets.



83. Comparison between railway freights paid by importers and our Mill as given below:—

	Pies
Howrah to Allahabad (513 miles) . . . . .	272 per lb.
Naihati to Allahabad (494 miles) . . . . .	260 „
Bombay to Delhi (848 miles) . . . . .	415 „
Naihati to Delhi (884 miles) . . . . .	324 „
Karachi to Lahore (755 miles) . . . . .	400 „
Naihati to Lahore (1,194 miles) . . . . .	472 „
Armenian Ghat (Calcutta) to Cocanada (648 miles) .	25 „
Naihati to Cocanada (681 miles) . . . . .	28 „

84. No.

85. (a) Compared with the foreign manufacturer, the Indian manufacturer is at a disadvantage in regard to the cost of plant and machinery.

Freight, insurance and duty, landing charges, etc., have to be paid over and above the foreign manufacturer's cost. If a part is broken, it often means replacement from home resulting in delay in starting up, the plant being kept unproductive for a much longer time than would be the case with a home mill. The question of interest on home purchases has also to be considered. The Indian manufacturer also has to carry more spares and stock owing to their being unobtainable in this country.

(b) Expert labour, which is at present chiefly imported, is naturally more expensive in India.

(c) Ordinary labour per head is cheaper in this country, but owing to larger numbers being necessary to do any particular job and the fact that spare men have to be kept for replacement and training in case of illness, the actual cost does not show any advantage as compared with Western countries. Allowance has also to be made for more frequent leave.

(d) Owing to labour not yet having become accustomed to working for a new industry which they regard with suspicion, we are at present at a disadvantage in this respect.

We believe the Indian Railways' charges are high, and might be reduced to help establish this nascent industry.

(e) The Indian manufacturer is at a heavy disadvantage regarding cost of auxiliary raw materials and consumable stores.

The freight on bleaching powder is 55s. per ton and duty at 15 per cent. on Rs. 12-8-0 per cwt.

The freight on china clay is 22s. 6d. per ton and duty at 15 per cent. on Rs. 85 per ton.

The mill stores, mentioned in reply No. 38 (a) have all paid freight and duty of 15 per cent. *ad valorem*.

The Board is fully conversant with the duty on sulphur.

(f) We believe freights in this country are higher than in England owing to the long distance between various consuming centres.

(g) See answer to (a).

(h) Customs duty is a severe handicap indeed, and while we do not object to a high duty where the materials taxed in this way are being satisfactorily manufactured in this country, it does seem wrong that materials which no one is manufacturing suitably in this country should be heavily taxed. Take bleach for example. There is no bleach-making industry in India, and we do not know that it is even suggested that this commodity should be manufactured in this country. Yet we pay a 15 per cent. duty and, in addition, bleach undergoes very rapid decomposition here, which means (as we must keep a stock) a heavy annual loss. In addition to this loss through depre-

ciation, we have to pay for this commodity a price which is about 50 per cent. higher than that which the home manufacturer pays.

(i) The Indian investor expects a much larger return on his capital than the English investor and there is a very much less capital available in India for new industries than in England.

86. Regarding the permanency or otherwise of the disadvantages mentioned above:—

- (a) Cost of machinery and plant will naturally be permanent under present conditions. Should the industry expand sufficiently to justify the engineers putting down paper-making plant and machinery, this would tend to disappear.
- (b) Cost of expert labour. We take it that this question refers to the high cost of imported expert labour. We are at a disadvantage which is not likely to be entirely removed for some time, but as Indian labour becomes more skilled, the disadvantage should be largely reduced and in the course of time might even be caused to disappear by the gradual substitution of skilled and technically trained Indian labour.
- (c) While the rates of wages are not likely to be reduced, the efficiency of Indian workmen will increase under the system of training we have introduced and increased efficiency will result in reduced cost.
- (d) Collection and transport of primary raw material and costs should improve as the organization to deal with them is developed and the consumption increased.
- (e) Cost of auxiliary raw materials and consumable stores in a large number of cases—temporary. Bleach, for instance, would be manufactured in the mill should we expand as we hope to do with the assistance of adequate protection.
- (f) We hope that freights on finished goods will be reduced in the near future and also that special concessions will be given to finished goods.
- (g) Maintenance of stocks of spare parts. Again it is a question of the industry growing large enough to justify plant being put down in this country. If this stage is reached, the necessity of holding excess stocks of spares will disappear.
- (h) Customs duty on imported materials—temporary, we hope, in the case of materials which are not now manufactured nor likely to be in this country.
- (i) The raising of capital. If sufficient protection is received to put the mills in the country on their feet, we consider that disadvantage would be lessened and the investors probably willing to accept a reduced return on account of the increased confidence which they would have in the industry.

## VII. EQUIPMENT.

87. We do not consider our mill sufficiently large as an economic unit of production to ensure economy.

The smallest unit of production that can be operated to the best advantage is in our opinion a two-machine mill.

88. The manufacture of both pulp and paper requires the employment of expensive machinery. The paper machinery is very elaborate. Pulp involves the use of very heavy plant which is expensive, in first cost and also in maintenance.

If a duty were placed on paper without a corresponding duty on pulp, small mills which could manufacture paper alone from imported pulp could

be set up in seaport towns at low cost as compared with complete plants which manufactured both paper and pulp from indigenous fibres, and these mills would employ but little labour, and do nothing towards developing the resources of the country.

89. Percentage of plant and machinery on total block outlay is 57.77 per cent.

90. Our plant consists of the following units:—

(a) *Bamboo Crushing Plant*.—This consists of a series of heavy rolls grooved and fluted, run in pairs. At the end of the crushing rolls is a cutting arrangement whereby the crushed bamboo is cut into chips. These chips drop into a circular rotating drum and are raised by an elevator to the top of the digester house.

(b) *Acid Plant*.—In this plant we manufacture magnesium bi-sulphite with which the bamboo is cooked.

The plant consists of two magnesite mixing tanks, one sulphur melting tank, one rotary sulphur burner, one combustion chamber, one cooling tank, one absorption tower, one vacuum pump.

(c) *Cooking Plant*.—The bamboo is cooked in digesters 42 feet long and 12 feet in diameter.

(d) *Blow Tanks*. These receive the contents of the digesters and consist of stout wooden tanks with a false bottom, the latter being perforated to allow liquor to drain away from the pulp.

(e) *Washing and Straining Plant*.—This consists of a long series of troughs over which the well diluted pulp flows slowly allowing any heavy grit or sand which has been held in suspension to settle out. The stuff then flows to a strainer where the fine fibres pass through, but where all unresolved or partially digested bamboo is held back. Thence the strained stuff passes over a drum washer. This consists of four drums covered with wire gauze. The dirty water is extracted and the pulp is treated with successive showers of clean water. The washed pulp then passes to the *Bleaching towers*, of which we have five. Bleach is added and the stuff is pumped across the towers successively. When fully bleached, the pulp is washed again and concentrated and pumped to the *Beaters*, of which we have four, three Tower Beaters and one Hollander Beater. When ready, the stuff is pumped to the machine chest and is ready for the paper-making machine.

(f) *The Paper Machine* is of modern design for the manufacture of fine printing and writing papers. It is 98 inches wide, has two presses, 17 cylinder and smooth rolls and three stacks of calenders. It is driven by an Ashworth and Parker engine which exhausts to the drying cylinders where the exhaust steam is used to dry the paper.

We are equipped with a cutter, a reeler and a guillotine.

We have the usual auxiliaries in the way of stores godowns, etc., machine shop, blacksmith's shop and foundry for small iron and brass castings.

(g) *Power Plant*.—Our power is obtained from a steam-driven power plant of the latest design.

The principal plant and machines in the mill are as under. (See also reply No. 95.)

Bamboo Crushing Plant—Jas. Bertram & Sons, Edinburgh.

Digesters—Chicago Bridge & Iron Co.

Acid Plant: (a) Burner—Hydraulic Machinery Co., Ltd., Montreal.

(b) Cooler—Constructed on site from local materials.

Magnesia Tanks—The Petroleum Iron Work Co., Ohio.

(c) Barker Absorption Tower—E. Barker, Boston, built by Hodge Boiler Works, Mass.

Blow Tanks—Constructed on site from imported timber.

**Washing Plant**—Chests, sandtraps, etc., made on site from locally obtained materials.

**Rough Pulp Screen**—Jas. Bertram & Sons, Edinburgh.

**One Leith Walk Strainer**—Jas. Bertram & Sons, Edinburgh.

**One set Washing Drums**—Jas. Bertram & Sons, Edinburgh.

**Bleaching House**—Towers built on site from locally obtained materials. Fittings, pumps and pipes from Jas. Bertram & Sons.

**Concentrators, two**—From Jas. Bertram & Sons.

**Chemical House**—Bleach Mixing Tanks, built from locally obtained materials. Piping from Jas. Bertram & Sons. **Size Boiler, Size Storage Tank, Size Mixing Tank, two Clay Mixing Tanks**, all from Jas. Bertram & Sons.

**Beater House**—Three Tower Beaters from Mason & Scott, London. **One Hollander Beater** from Jas. Bertram & Sons.

**Chests and Sandtraps**—Built on site from locally purchased materials.

**Paper Machine and Fittings**—From Jas. Bertram & Sons, Edinburgh. **Machine Engine**—Ashworth & Parker, Bury.

**Paper Cutter**—Jas. Bertram & Sons.

**Paper Reeler**—A. Sheldon & Sons, Wells, Somerset.

**Guillotine**—Greig & Co., Edinburgh.

**Press Roll Buffing Machine**—Jas. Bertram & Sons.

**Power Plant**—Brush Ljungstrom Turbine by the Brush Co., Loughborough.

**One Gravity Filter Plant** of 20,000 gallons per hour capacity by Paterson Engineering Co., Ltd., London.

**Motors**—The various motors in the mill were obtained from the following firms:—

Bruce Peeble, Edinburgh.

Metropolitan Vickers, Manchester.

English Electric Co.

British Thomson Houston Co., Rugby.

**Machanic's shop: Lathe**—D. Mitchell & Co., Rugby.

**Boring Machine**—D. Mitchell & Co., Rugby.

**Placing Machine**—Summerskill Brothers.

91. Yes, but the industry requires protection in order to develop itself and the sources of supply of raw material, and to offset the extra costs of machinery and chemicals as compared with home mills.

Our Mill is undoubtedly the best equipped and most modern mill operating in India to-day, and it compares most favourably with any home mill.

92. There is a continuous effort at improvement in the various large paper-making countries. As regards processes, a number of new processes have been devised, but none have been proved out except the new process, which we are successfully carrying out for the treatment of bamboo by the modified sulphite process devised by Mr. Jas. L. Jardine of Penicuik, Scotland. In machinery, there has been no noticeable advance. In novel ideas the big advance has been in newsprint machines in which there is a continuous striving after greater width and greater speed and mechanical devices which allow of the quick handling of paper being manufactured at high speeds. Modern new machines are up to 240 inches wide and operate at speeds up to 1,000 feet per minute.

In fine mills there has been no noticeable advance in plant in the last 10 years. Some small devices to give higher efficiency and great economy and an increased production have been introduced, but there has been no big advance in machinery.

93. Our whole plant was erected later than 1914. See reply No. 90.

We have adopted a new and original process for the manufacture of paper pulp from bamboo. This is done under a protected process worked out by Mr. James L. Jardine of Penicuik, Scotland, and patented jointly in the names of Ian. T. Nelson and J. L. Jardine. The process has been entirely successful after many years of experiment and research.

Our process to a certain extent runs parallel with the methods adopted for the cooking of wood pulp. A different acid is used in cooking though the process of manufacture is practically the same to that used in the preparation of acid used in wood cooking.

In the manufacture of wood pulp, the wood is prepared by chipping and screening. Bamboo is prepared by crushing, the machine being specially designed for crushing bamboo and is patented and protected. After the crushing process, the bamboo is loaded into the digesters and acid is pumped in and cooked. From then onward, the process compares with the ordinary sulphite practice, only we have the most modern and up to date methods of dealing with the bleaching and preparation of the pulp for manufacture into paper.

The acid is manufactured in a separate plant which is slightly modified from the most modern method of acid manufacture as practised in the United States, of America. When the acid is ready, it is pumped to storage tanks, from whence it is drawn to the digesters as required.

94. (a) and (b) This depends on the verdict of the Tariff Board and resulting legislation.

95. Reply No. 90 gives particulars of machinery made in India. The erection of imported plant was a considerable item.

#### VIII. CAPITAL ACCOUNT.

*Being a private Company the Board will appreciate our reasons for asking that the figures given in this Section be treated in strict confidence.\**

96. Block value as at 31st March 1924 was as under:—

	Rs.	A.	P.
(a) Patent Rights . . . . .	3,80,000	0	0
(b) Lands . . . . .	1,18,438	10	3
(c) Buildings . . . . .	11,30,328	8	1
(d) Plant and Machinery . . . . .	24,27,277	13	6
(e) Other Miscellaneous Assets . . . . .	1,45,435	3	6
	42,01,480	1	4

97. The figures given above represent the values after depreciation has been written off.

The total amount written off since manufacture commenced is as follows:—

	Rs.	A.	P.
Buildings . . . . .	57,151	8	2
Plant and Machinery . . . . .	4,01,305	0	10
Other Miscellaneous items . . . . .	6,569	11	0
	4,65,026	4	0

98. The depreciation taken is equal to the rates we consider suitable and at the actual income-tax rates allowed by the authorities.

\* This stipulation was subsequently withdrawn.—See oral evidence.

99. We regret it is not possible for us to give an estimate of present day cost owing to the short time available. We do not see any reason to suppose that the operating cost of any new mill could be less than ours.

100. Brief particulars of principal remittances for purchase of plant are as under:—

						Rs.	A.	P.
1920	March 31.	£35,000	0	0	2/4	3,00,000	0	0
		£32,000	0	0	2/4	2,74,285	11	4
	June 14.	£ 1,530	0	0	1/11 1/2	15,625	8	6
	July 5.	£ 3,750	0	0	1/9 1/2	41,618	7	11
	August 18.	£ 3,586	14	10	1/10 1/2	38,484	0	1
	October 7.	£ 2,170	0	0	1/8 1/2	25,878	4	2
	November 13.	£ 8,490	0	0	1/8	1,01,880	0	0
1921	January 4.	£ 9,700	0	0	1/5 1/2	1,33,028	9	2
	February 4.	£ 1,406	11	5	1/4 1/16	29,537	10	0
	September 12.	£ 5,546	19	1	1/3 1/2	85,201	3	3
		£ 9,531	5	2	1/3 1/16	1,48,178	4	3
		£ 2,186	6	2	1/4	32,794	10	0
	November 10.	£ 5,000	0	0	1/4 3/4	74,568	1	8
		£ 5,000	0	0	1/4 1/2	74,713	2	0
	November 15.	£ 5,000	0	0	1/4 3/8	73,701	6	8
		£ 7,623	0	0	1/4 3/16	1,10,895	10	8
	December 14.	£ 1,845	0	0	1/3 1/2	28,003	2	7
1922	January 14.	£ 3,708	0	0	1/3 1/4	55,838	1	10
	February 9.	£ 860	0	0	1/3 3/4	13,183	3	9
	March 9.	£ 837	0	0	1/3 3/4	13,091	15	6
	May 14.	£ 1,464	0	0	1/3 3/4	22,442	2	5

101. The authorised capital is Rs. 40,00,000, paid up capital Rs. 30,00,000 all in ordinary shares.

102. There are no preference shares.

103. There are no deferred shares.

104. As no dividend has ever been paid, this does not apply.

105. Nil.

106. There are no debenture loans, but the Company has loans outstanding which on the 31st March last amounted to Rs. 26,36,342. Interest is as per reply No. 120.

107. There is no reserve fund.

108. As mentioned above, the Company's future policy depends on the deliberations of the Tariff Board and resulting legislation. The Company, has, however, under consideration one or two schemes for the extension of its plant to double the output. Such extension might cost Rs. 10,00,000 which, however, is only an approximate estimate.

## IX. Cost of Production.

### (a) Works costs.

109. (Works Costs Forms.)

110. The Works costs were undoubtedly increased for a period from the commencement of manufacture owing to experimental work and the mill not having settled down to normal operation inseparable from the starting up of a new plant and process.

111. The costs of last year were abnormally high because the development of the production and the raw material is still in its infancy.

If the proprietors extended the plant owing to confidence in the future fiscal policy in India, costs would be considerably reduced, but we are unable at present to give an exact estimate.

112. While the summarised figures which we have already embodied in these replies give, we believe, all information necessary to the Board, we claim the privilege of withholding our detailed monthly cost sheets which might, if accidentally obtained, give very valuable information to competitors which we, as pioneers, have obtained at great expense.

113. We should have been in a position to comply with the Board's request had sufficient notice been given us to refer to Europe.

(b) *Overhead Charges.*

(i) *Depreciation.*

*The figures given in this Section must also be treated in strict confidence.\**

114. The rates of depreciation allowed by the Income-tax authorities are as follows:—

	Per annum.
Buildings . . . . .	2½ per cent.
Machinery . . . . .	7½ per cent.

We consider these rates suitable.

115. Annual sum required for depreciation at Income-tax rates.

(a) on assets valued at cost, and

(b) if assets are taken at their value after deducting all depreciation written off to 31st March 1924 is as under:—

	(a)			(b)		
	Rs.	A.	P.	Rs.	A.	P.
Buildings . . . . .	29,687	13	8	27,718	3	3
Machinery in continuous operation . . . . .	2,12,143	11	0	1,82,045	13	6
Other Assets . . . . .	4,848	13	6	3,914	13	0
	2,46,680	6	2	2,13,678	13	9

116. In view of our reply No. 99, this does not apply.

117. Our present output (half-year ending March 1921) incidence per ton of finished paper for depreciation is

	Rs. A. P.			On full capacity.		
	Rs.	A.	P.	Rs.	A.	P.
(i) as per 115 (a) . . . . .	97	8	3	85	10	5
(ii) as per 115 (b) . . . . .	84	10	10	74	6	1

118. Working capital required is Rs. 10,00,000 for both (i) and (ii).

119. The Company has had to borrow loans as mentioned in Reply No. 106.

120. The amount borrowed is as mentioned in Reply No. 106.

If capital has to be borrowed beyond a fixed limit, interest is payable at Bank Rate.

121. The Works cost of one month's output equal approximately 10·00 per cent. of our Working Capital.

122. The average value of stocks of finished goods held by the company varies according to market conditions and according to the class of goods sold.

Confidentially, we should say that the average value of finished goods held by ourselves and our agents is about 3½ lakhs.

\* This stipulation was subsequently withdrawn.—See oral evidence.

The trade terms provide for cash payment and credit of from 45 to as much as 90 days in some cases.

123. It is necessary to hold good supplies of coal and raw material.

Rs.

The average value of coal stock is . . . 10,000

The average value of bamboo is . . . 2,00,000

### III. AGENTS' COMMISSION AND HEAD OFFICE EXPENSES.

*These figures must be treated in strict confidence.\**

124. The Company's Head Office is in Calcutta under the control of its secretaries, Messrs. Andrew Yule & Co., Ltd.

125. (i) Annual amount of head office expenses is Rs. 42,334. The Secretaries are allowed Rs. 1,000 per month for office expenses, which, however, they have never charged.

(ii) The Secretaries have never charged commission. The amount above-mentioned is the bare expenditure actually incurred.

126. See Reply No. 125. If commission was paid, it would be 2 per cent. on nett sale-proceeds.

127. The cost per ton of finished paper, 31st March half-year of Head Office expenses is—

	Rs.	A.	P.
Actual output . . . . .	16	8	1
Full capacity . . . . .	14	11	0

### X. MANUFACTURER'S PROFITS.

*These figures must also be treated in strict confidence.\**

128. We consider 10 per cent. a fair return on Ordinary Shares.

129. Without a protective duty it would be impossible at the present time to raise either the preference or ordinary capital for a paper mill. If, however, a protective duty was imposed on both paper and pulp and guaranteed for, say, 10 years, we think that funds might be obtainable at (a) 8 per cent. free of tax for preference shares and (b) 6½ per cent. for debentures. Provided the industry had been making good profits in the past, these rates might be shaded to say, (a) 7 per cent. and (b) 6 per cent.

130. 15 per cent.

131. If interest on loans were paid on the present basis and also a 10 per cent. gross dividend on the present paid up capital, the increased cost per ton of paper on present output would be Rs. 118-9-5, or Rs. 104-2-8 on full capacity.

If present loans were converted into capital and a 10 per cent. gross dividend paid, the increased cost per ton would be Rs. 160-14-10 on present output or Rs. 141-5-8 on full capacity.

### XI. CLAIM FOR PROTECTION.

Our replies to this section unless otherwise stated refer to both the pulp and Paper industries

132. Yes, we consider our industry particularly comes within the conditions laid down in paragraphs 97 and 98 of the Fiscal Commission's Report as being worthy of assistance and protection, especially in its early years.

\* This stipulation was subsequently withdrawn.—See oral evidence.



We further consider that this particular form of pulp and paper manufacture from Bamboo to be what the Fiscal Commission had in mind when drafting the paragraphs referred to.

Furthermore, the whole question of the manufacture of pulp from bamboo has for years been directly suggested and encouraged by the Indian Government and our industry was established on this assumption.

(a) The industry possesses an abundant supply of raw materials for the manufacture of pulp and consequently paper, cheaper power in the shape of cheaper coal than is obtainable in most foreign markets, an ample supply of labour and a large home market. The development of the pulp trade from bamboo will develop the country's natural resources in a new direction, supply additional revenue and give large indirect employment.

(b) The Indian market is flooded both with pulp and paper, in many instances at dump prices which maintains the necessary high output of foreign mills without which their costs increase. In the face of this unfair competition, Indian pulp and paper manufacturers find it impossible to maintain or develop their market although all resources are available to make the industries entirely Indian. Without the help of protection, it is most unlikely that the industry will develop to any great extent and may be stifled and in support of this we draw the Board's attention to the history of the paper industry in the past. It is true that bamboo has not been developed as a source of supply, but such development is unlikely to take place unless the industry is protected.

The deliberations of the Tariff Commission are being watched with great attention by financial interests associated with the paper and pulp trades and it may be that the result will decide the question as to whether India is to become one of the great pulp and paper producing countries of the world, or whether, as raw supplies recede in North America and Europe, the supplies replacing them will come from elsewhere.

India is the first country in which the results of experiments in the manufacture of bamboo have been put into commercial practice.

There are other countries very suitable to the development of the manufacture of pulp and paper from bamboo and in the event of encouragement not being given in this country, it is quite possible to conceive a time coming when India might import pulp and paper made from bamboo from abroad to the detriment of other countries' natural resources and the detriment of her own.

(c) Yes, we fully anticipate that, if adequate protection be given, the industry will develop rapidly.

Such development will increase the production of the raw material, develop its cultivation and collection in suitable situations and so reduce its cost.

Adequate protection will further stimulate the industry. Factories will tend to be increased to the most economical size and to be established near the large markets to which at present considerable freights have to be paid by foreign paper.

Such encouragement will be given to the Bamboo Industry that as a result of such increased attention, economies and improvements in manufacture are sure to result.

133. (a) Yes, large scale output will undoubtedly effect economies both in the actual manufacture of paper and pulp, and also in the supervision and distributing organization.

Furthermore, we believe that large scale output will, by stimulating the growing and collection of the raw material, reduce its prices.

Bamboo appears to be a profitable crop requiring very little cultivation and which can utilise much land which is at present of slight value, and it is probable that its production will increase more than proportionately to its consumption.

(b) The whole needs of the country could be supplied by home production. See 136.

134. Emphatically yes.

The paper and pulp industries are certainly of importance on national grounds. The paper industry by itself we do not consider of supreme national importance until co-related with the pulp industry. Should the paper industry in this country, even if large enough to supply the nation's needs, be built up without a corresponding pulp industry, there is less reason for protection on national grounds, because if, in an emergency, the country was cut off from its source of supply of primary raw material, then the paper mills would automatically have to shut or reduce output. If an industry is to be built up to be a national asset in case of emergency, then the first essential is that it should be a nationally self-contained unit quite independent of outside supplies of primary raw materials. The pulp industry is the first essential and if scope is given for the establishment of the pulp industry, the paper industry will automatically follow. We certainly consider that any country which has any importance as a nation should have an independent source of paper supply. It is difficult to imagine the state of a civilised country should its paper supply be entirely cut off and the pulp industry is the first essential of an independent paper supply. We might put it that the pulp industry is an essential key industry, and given the establishment of pulp industry, paper is bound to follow. To develop a paper industry without a corresponding pulp industry is to build on sand. The importance of paper increases step by step with the advance of civilization and the spread of education.

135. Yes, the supply of raw materials and cheap power and a large home market, also the presence of large Magnesite deposits in the country. The latter are now only worked on a small scale near Madras, but our industry would help their development.

Their future above all others which renders the establishment of the pulp and paper industry in India peculiarly suitable is the enormous and practically inexhaustible supply, of raw materials in the form of bamboo, which, if developed is available at an economic price. The world's resources of pulp wood and other primary raw materials are rapidly diminishing, and reforestation is a matter of years, whereas India's tropical climatic condition can reproduce paper-making fibrous growth in 3 or 4 years. The paper industry is constantly on the look-out for new resources of suitable raw materials. The two materials which are being particularly experimented with at the moment and on which hopes for the future are being built are bamboo and straw. The manufacture of paper and pulp from bamboo is past the experimental stage now, and as it is an infinitely superior fibre to straw, with reasonable support in the early stages of the industry, there is no reason why bamboo pulp should not in the course of a very few years supply a great proportion of the world's demand for paper pulp. The raw material is there, and it only requires a little assistance to overcome the initial difficulties inherent in the starting of a new and highly technical industry in the East.

136. With the development of the paper trade in India along the lines upon which we have started, we believe it possible that in the not very distant future, Indian production will be able to compete with all kinds of imported paper. We are strongly of the opinion that to impose a duty exempting certain kinds of paper will be to confine the development of paper trade to certain narrow channels and to prevent its spread over the broad fields which it may very well otherwise occupy. Furthermore, for practical reasons, we consider that duty excluding certain kinds of paper will be impossible to administer satisfactorily on account of the practical difficulty in distinguishing the various qualities, especially when there will be every inducement for the shippers to try and evade the customs duty. Also if some of the cheapest forms of paper were excluded, the difference in price between these papers free of duty, and the better classes of paper

might become so accentuated that very poor qualities of paper might be used to replace better grades to the detriment of the main lines manufactured by Indian Mills. It is often false economy to use cheap papers of this kind. The presence of mechanical wood pulp in a paper renders the conditions for gradual decay and ultimate disintegration more favourable. Many buyers find it difficult to differentiate by a look between a wood free paper and a mechanical wood paper and the inclusion of the latter in any protective duty would tend to protect such buyers against deception from inferior qualities. The duty should certainly be imposed on all grades of pulp as well as paper, as there is no quality of imported pulp which will not compete with the Indian product.

137. (a) and especially (b) are undoubtedly serious menaces, especially as we understand that Germany proposes to make great efforts to re-establish a cheap paper in the Indian market, and while we can adduce no actual proof, we believe that freights will be subsidized to help her depreciated exchange to this end.

We can think of no satisfactory way of safe-guarding underselling by reason either of depreciated exchange or subsidized freights except by suggesting that power be given to allow the Tariff Valuation to be altered from time to time to meet and combat such emergencies.

138. (a) The existing customs duty is 15 per cent.

(b) We are not in a position to answer this question except as regards landing charges which are Rs. 2-8-0 per ton.

We believe that there are in many cases substantial rebates or subsidies over and above the quoted rates of freight. Quotations are invariably made and business transacted on a c.i.f. Indian port basis.

139 and 141. We consider that a protective duty should be imposed immediately on both paper and pulp simultaneously and that a similar rate of duty on each is desirable. The protection of pulp as well as paper is a necessity, as the former is a manufactured article and all manufacturing difficulties are connected with pulp production. The manufacture of paper from pulp is a comparatively simple and well-known process. We also believe that the minimum duty which can protect the industry against:—

1. dumping paper and pulp in India at below the cost of production by foreign mills in order to remove their surplus stocks and so maintain the prices in their home markets;
2. depreciated exchanges;
3. subsidized freights;
4. the disadvantages that the Indian Mills suffer owing to their higher cost of machinery, chemicals and consumable stores;

is 25 per cent. based on Indian market rates on both paper and pulp.

This duty should be imposed simultaneously, and it is probable that the pulp industry being a newer one than the paper trade (apart from bamboo) is most in need of this protection, and of having it quickly.

We do not believe in any delay in imposing the duty on pulp, as this would appear to have obvious disadvantages:—

1. It would place the industries which manufacture direct from the raw material at a disadvantage as compared with mills which produce largely from imported pulp.
2. The pulp industry is one which directly develops the country's resources, and any delay in the imposition of the duty on pulp delays development of the country, along with that of the industry.
3. If the duty on pulp be delayed, this country will in the meantime be flooded with imported pulp. In addition to large supplies which the consumers will probably buy, dealers will stock large

quantities and gain for themselves the benefit of those duties which would otherwise go to the Government.

4. The industries which largely consume pulp are the older paper mills, which have accumulated large reserves during the years of prosperity. The young industries which are most in need of protection are the ones which require duty on pulp.

Bamboo pulp and paper manufacture is an infant industry and has never had the benefit of good times to put it on its feet, and therefore, has a much stronger claim on Government for help than certain other industries which were in a position to accumulate large reserves during the "boom" years.

However, to meet the wishes of those who use pulp to a considerable extent and consequently desire to delay the imposition of this duty, we would not object, if the Board, while imposing both duties simultaneously, were to reduce the pulp duty to 20 per cent.

We would, however, strongly oppose the reduction of the duty below 25 per cent. for paper and 20 per cent. for pulp or the non-imposition of the latter at once. Except for this question of date of imposition of duty, we do not think there can be any conflict between the claims of paper and pulp. As the pulp industry would tend to develop the country more than the paper trade, the pulp duty appears to us to be more important from the national point of view.

We recommend these rates of duty because we believe that they are the minimum that can enable the pulp and paper industries to compete in the future with the imported articles and so enable them to establish and develop themselves. At the same time, we do not believe the rates sufficient to cause serious hardship even to the largest or the poorest consumers of paper or pulp.

As explained in Reply No. 70, we believe that the main reason for present importations of pulp is to be found in its cheapness as compared with the cost of manufacture in this country. The quantity imported has increased since 1919-20 (this being the first year for which the figures are available), as shown below :—

	Cwts.
1919-20 . . . . .	110,692
1920-21 . . . . .	188,799
1921-22 . . . . .	191,821
1922-23 . . . . .	180,244

In the few years previous to 1919, we understand no pulp was imported, yet we believe that Mills were able to work to their full capacity using grass only.

From imported pulp, they are able to produce better qualities of paper than we believe is possible from grass alone. The absence of a duty on pulp has therefore already interfered with the development of the resources of this country, and in our opinion, any delay in the imposition of a protective duty can only result in delaying the country's development, especially the cultivation of bamboo which we believe is the only indigenous fibre capable of successfully manufacturing the higher grades of paper.

If a protective duty is imposed on pulp, we are of the opinion that the local mills will be able to immediately increase their production of paper from indigenous materials to the capacity obtained during the war, when we believe it was impossible to obtain imported pulp.

140. We believe that if the paper trade had in the past devoted the amount of attention to the use of bamboo which has been devoted to other materials, the paper industry might be in less need of protection to-day than it is. If, however, the paper trade industry had been adequately protected in the past, we believe that plants would have been so developed and up to date researches in bamboo as a raw material would have been so encouraged

that in the case of the old factories they would have been able to compete on level terms to-day with imported paper in fair competition.

We would like to emphasize that the paper industry in India from bamboo is only in its second year, and is at present only represented by the India Paper Pulp Co., Ltd., whose factory was built at the time of high prices and who has had no opportunity of accumulating profits.

#### FORM I.

*Statement showing the total Works Costs expenditure incurred on the production of paper during 1923-24.*

	Rs.
1. Primary raw material . . . . .	2,44,098
2. Purchased pulp . . . . .	98,314
3. Auxiliary raw materials . . . . .	2,90,195
4. Mill labour . . . . .	1,60,913
5. Power and fuel . . . . .	1,37,922
6. Ordinary current repairs and maintenance of buildings, plant and machinery . . . . .	1,00,718
7. General services, supervision and local office charges . . . . .	48,510
8. Miscellaneous . . . . .	51,184
9. Freight . . . . .	49,967
	<hr/>
	11,81,821

Total production of paper for the year 2,435 tons.

#### FORM II.

*Statement showing the Works cost per ton of unbleached pulp for 1923-24.*

	Rs.
1. Primary raw materials . . . . .	110.45
2. Auxiliary raw materials . . . . .	55.93
3. Mill labour . . . . .	36.40
4. Power and fuel . . . . .	31.17
5. Ordinary current repairs, etc. . . . .	12.76
6. General services, etc. (supervision) . . . . .	10.97
7. Miscellaneous . . . . .	7.34
8. Nil. . . . .	...
	<hr/>
	265.02

Total production of unbleached pulp for the year 2,210 tons.

## FORM III.

*Statement showing the Works Cost per ton of bleached pulp for 1923-24.*

	Rs.
1. Manufactured unbleached pulp . . . . .	239 65
2. Purchased unbleached pulp . . . . .	40 23
3. Auxiliary raw materials . . . . .	33 15
4. Mill labour . . . . .	3 29
5. Power and fuel . . . . .	5 64
6. Current repairs, etc. . . . .	2 47
7. Supervision, etc. . . . .	99
8. Miscellaneous . . . . .	1 33
9. Nil. . . . .	..
<b>TOTAL</b>	<b>326 75</b>

Total production of bleached pulp for the year 2,444 tons.

## FORM IV.

*Statement showing the Works Cost per ton of finished paper for 1923-24.*

	Rs.
I. Manufactured bleached pulp . . . . .	327 95
II. Purchased bleached pulp . . . . .	..
III. Auxiliary raw materials . . . . .	35 13
IV. Mill labour . . . . .	29 73
V. Power and fuel . . . . .	22 65
VI. Current repairs, etc. . . . .	27 31
VII. Supervision, etc. . . . .	8 96
VIII. Miscellaneous . . . . .	5 33
	457 06 f.o.r. Mill.
IX. Freight, etc. . . . .	28 21
	<b>485 27</b>

Total production 2,435 tons.

*Statement IV.—Note, dated 31st July 1924, submitted by the India Paper Pulp Company, Limited.*

When our representative was appearing before the Tariff Board, the President referred to a circular that Messrs. John Dickinson and Company, Limited, had circulated to many of the paper dealers for the purpose apparently of organising and fomenting an opposition to the application for protection of the paper manufacturing industry.

He kindly offered us the alternatives of replying verbally or by letter to this circular, and we are herewith accepting the latter.

In reply to No. 1, we infer from this paragraph that Messrs. John Dickinson and Company, Limited, are not opposed to protection, but that they suggest, as an alternative to the usual rotation, that Technical Paper and Pulp Manufacturing Schools should be set up for young Indians before any encouragement is given to the industry itself. We cannot believe that they are serious in this suggestion, and a little consideration will, we think, show them its impracticability.

2. The statement "Paper" is the cheapest manufactured commodity is at least open to argument.

For the rest, Messrs. John Dickinson and Company give a general list of conditions which they consider essential to successful paper manufacture. As, however, they do not suggest whether Indian conditions comply with their list or not, they adduce no argument either for or against protection. They name, however, "Proximity to market" as one essential to success. This being so, we cannot understand why Messrs. John Dickinson and Company occupy themselves with a market which is about 7,000 miles away from all their sources of supply.

3. If correct, the second paragraph implies that the price of imported paper is 25 per cent. below that of locally produced paper. Such a wide difference appears to support our contention regarding dumping from foreign countries against which we ask protection sufficient to discourage such policy.

4. Surely this argument is all in favour of protection which would presumably encourage factories to be set up near the various sources of raw materials and in closer proximity to the various centres of consumption and so tend to reduce the "magnificent distances" which in the case of the goods which Messrs. John Dickinson and Company handle cannot be less than 6,000 miles.

5 and 6. Protection as asked for will not increase the expenses of schools and educational requisites to a degree which will hinder their development and consumption in the slightest.

Regarding the rigid economy being exercised in Government Offices, we do not believe this has anything to do with the price of paper or that a reduction in prices would be a sufficient reason for Government relaxing such economy.

7. We believe that the cost of paper is a relatively small proportion of the cost of administration of a newspaper. At the same time, we have expressed our willingness to agree to the importation of newsprint for newspapers at a reduced duty. Newspapers' importations should be fully protected by license.

There are, we believe, a number of Indian newspapers which continue to flourish in spite of using Indian made paper.

8. Our mill can manufacture any grade paper, for which there is a good demand of as good quality as Messrs. John Dickinson and Company can import, and other Indian mills can manufacture all the cheapest papers excepting mechanical paper which is used almost entirely for newsprint.

We would request that the Controller of Printing, Stationery and Stamps be asked if there is any quality of paper of which he uses a good

quality which either we or one of the Indian mills cannot manufacture to his satisfaction. We can show special books recently published by the Government printed by their Press Superintendent on our paper. Some of these books were formerly printed on imported paper.

9. We believe that with protection the Indian mills will increase much faster than the demand.

10 and 11. We are of opinion that the increase in the cost of paper would have no effect on the cases mentioned.

12. First paragraph. This is surely a matter for the Board to decide.

13. We do not think that the first two paragraphs are of the sort that will carry much weight with the Board, but we believe that the Managing Agents of the largest mill in the country are *not* remunerated on output. If the author does not make sure of the facts on such an important matter, it will at the least detract heavily from the weight of his other assertions.

14. As stated Indian manufactured paper as a rule commands slightly higher prices than imported.

"Job Lots" are unfortunately present in every mill's manufacture. We are willing to provide figures to show that ours are not abnormal.

15. Third paragraph. It would be interesting to know whence Messrs. John Dickinson and Company get their information which is quite contrary to any that has come our way.

16, 17 and 18. Messrs. John Dickinson and Company allude, we notice, to British importation. A large proportion of their imports are from late enemy countries such as Germany and Austria.

Reading No. 16 in conjunction with No. 2, Messrs. John Dickinson and Company appear to suggest that conditions in India are most suitable for paper manufacture and that therefore the industry is worthy of protection.

They state, however, that "lack of foresight," "knowledge of the market, etc.", are the loads which are stopping the development of Indian paper factories.

Then they state that about half a dozen British concerns have recently had to shut down.

Messrs. John Dickinson and Company in their No. 13 imply that Indian mills are still manufacturing to full capacity. This surely rather confuses their argument.

We await with much interest the further information promised by Messrs. John Dickinson and Company in August.

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*Statement V.—Statement showing estimated costs of the India Paper Pulp Company during the season 1923-24.*

	Rs.	A.	P.	
Cutters . . . . .	15	0	0	per ton.
Rafting to Jaitpura . . . . .	2	8	0	" "
Dubash-Crushing and Despatch . . . . .	9	0	0	
Boating to Jetty . . . . .	2	8	4	
Landing charge . . . . .	2	4	0	
Railway freight to Naihati . . . . .	8	7	0	
Siding charge . . . . .	0	1	9	
	39	13	1	

Overhead charges including royalty and rent . Say Rs. 44,000.



*Statement VI.—A note regarding the Kasalong Reserve submitted by the India Paper Pulp Company.*

The Company commenced negotiations with the Government for this Bamboo Reserve concession late in 1918.

Early in 1919 one of the Company's representatives visited the Reserve and he was accompanied by Mr. R. S. Pearson, Forest Economist, and Mr. H. S. Gibson, Deputy Conservator of Forests.

The party proceeded some 60 or 70 miles into the heart of the forest and after choosing what was considered an average area, they carefully estimated the available tonnage per acre.

It was ascertained that the muli specie was most common in the area. This specie flowered in 1911-12 and so will not flower again for at least 30 years.

The labour question was considered and the party were of opinion that there was ample labour if properly handled and organized but organization was admitted to be difficult and the influence and power of the money-lenders in the district was noted.

The party considered the Kasalong had the following advantages:—

1. Ample local labour.
2. Excellent river for rafting to Chittagong throughout the year.
3. Bamboo stems are available on both sides of at least 150 miles of river exclusive of numerous small streams.
4. It is within easy reach of Calcutta.

The only disadvantage was that the cost of extraction per ton might be more for the first year or so than in Barma area, but freight costs would be less.

It was estimated that about 30,000 tons were rafted down each year and the area might therefore be safely calculated to supply sufficient bamboo for a pulp mill of considerable capacity.

The cost of extraction for muli was estimated at Rs. 14-7 per ton of air dry stems at Mainimukh. It was noted, however, that this figure might be exceeded for the first year or so until labour would be organized and native money-lenders abolished.

Particulars of extraction during 1916-17 and 1917-18 were given as under:—

	1916-17.	1917-18.
	Rs.	Rs.
Muli . . . . .	25,17,040	33,43,000
Orah . . . . .	4,91,675	3,31,660
Dolu . . . . .	10,48,200	13,61,240
Metinga . . . . .	7,085	350
Kaliserri . . . . .	50	50
	<hr/> 40,64,050	<hr/> 50,36,300

The average cost of all the species was estimated at Rs. 11-2 and an all round price of Re. 1 per ton for floating to Chittagong was added making the average cost of Rs. 12-2 per ton at Chittagong. These figures were stated to be undoubtedly high due to the small size which the muli had attained since it flowered in 1911-12.

With regard to labour, it was estimated that from 3 to 4 thousand hillmen and a thousand Chittagonians from the plains, entered the reserve annually to cut bamboos. The actual number of men cutting bamboos depended on the state of their crops: in good years they cut less, when the crops were low they were forced to cut more bamboo to earn their livelihood. The

Chakmar or hillman, when wishing to cut bamboo, first had to go to the money-lenders, who advanced him sufficient money for purchase of rice for himself and his family. When the bamboos were cut and extracted he sold the stems at Mainimukh to a dealer, who was often enough the man who had lent him the money.

To discharge his debt, he had to pay his money and 25 per cent. interest. However, when he sold the bamboos to the same man who financed him, he struck an extremely poor bargain.

The method by which the Chittagonian works is similar to that of the hillman, except that the rate of interest is somewhat below and he usually makes a trifle on the transaction.

The party were of the opinion that there could be no doubt that were a steady demand to arise, controlled under proper supervision, both the hillman and the Chittagonian would receive more adequate remuneration for their labour which would be a distinct inducement towards increasing the labour supply.

The Company was advised that for the first year or so, the best method of working would be through a local contractor, preferably through one of the Chakma Raja's relatives, which would result in labour forthcoming in large quantities. Later on, the Company might be able to work direct through local gangmen including a European to supervise the extraction work.

On the above information, the Company concluded the lease from the Government for the Kasalong Reserve, no royalty being payable for two years commencing from the 1st January 1920.

The Company commenced extraction late in 1919 and engaged Kumar Ramoni Mohan Roy (Chakma Raja's brother) for the work. As a result, about 400 tons bamboo only were received, the cost of which worked out at a very high figure per ton. This, however, was not altogether unexpected on account of its being the first season.

For the second season 1920-21, we engaged an influential contractor at Chittagong. We received about 900 tons and the cost worked out three times as much as the estimate calculated upon when the license was negotiated.

The cost per ton was greatly enhanced by the high rental the Company had to pay for storage accommodation of stems at Chittagong and it was not until late in 1922 that a suitable and economical site was obtained 14 miles upstream of Chittagong.

It will be noticed in the estimated cost that no provision was made for losses by flood. Such losses have proved far more serious than was anticipated and although every effort is made to recover stems so lost, the cost involved owing to long distances having to be covered to trace such losses, exceeds the value of the stems so lost.

After the first season, we endeavoured to obtain the services of a European Forest Officer and we applied to the Forest Department as we were unable to obtain any one with sufficient knowledge of this work. The Forest Department, however, was itself short of officers and was unable to lend us any assistance. For the third season 1921-22 we again employed the Chittagong Contractor, but the result did not show any improvement on previous seasons. Moreover, the power of the money-lenders over the Chakma cutters was found to be far greater than any one had hitherto imagined. They realised that the Company's work in the reserve was entirely against their vested interest, and while we can adduce no actual proof, we know that many hindrances which the Company has experienced in its work have undoubtedly had their origin from this source. The Company has all along endeavoured to emancipate the hillmen from the money-lenders in order that the hillmen should get a fairer percentage of the cost of extraction.

For the last season 1922-23 the Company engaged a European officer who succeeded in obtaining a very considerable increased tonnage and although the cost showed an improvement it was still above what the Company could

afford to pay. This officer unfortunately died in March 1923 at Chittagong from cholera. The experience he had gained on the Company's behalf therefore was as a result unfortunately lost.

Another officer was engaged for the season 1923-24 and succeeded in obtaining an approximate equal tonnage as the previous officer.

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*Statement VII.—Note, dated 30th August 1924, submitted by the Indian Paper Pulp Company, Limited.*

When the writer was giving evidence before you in Simla, we explained that while we would not oppose the exemption of newspapers from any increase of duty, yet we were afraid that if mechanical newsprint as a whole were exempted, the resulting further margin between its price and that of other papers might increase its consumption to a considerable extent and cause it to encroach on the market for other papers. That is to say, we apprehend that the wide difference would induce the market generally to order low quality mechanical wood papers in place of the usual qualities at present manufactured by Indian mills.

We then suggested that the paper required for newspaper productions might be exempted by license, but admitted in replying to the President that the subject bristled with difficulties and that we had been unable to find a really satisfactory solution.

Since giving evidence, we have again carefully considered the problem and discussed it with the members of the Indian Paper-makers' Association, whose interests on this point are identical with our own.

While we are still very doubtful as to what will be the effect, yet the question of exempting newspapers by license is so difficult that if the Tariff Board see their way to recommend a protective duty on paper, we are willing that mechanical newsprint should be exempted from an increase over its present duty, at any rate until such time as we can see what effect such differentiating may have on the paper trade generally.

The method of exempting mechanical papers from additional protective duty is difficult, especially when misdescription on an invoice might mean a large benefit to the concerned and when differences in quality will have to be so carefully scrutinised by the customs authorities.

One way of deciding the dividing line could be based on price. That is to say, that white papers whose market price was below a certain figure (to be fixed from time to time) on the market rate schedule, should be exempted from the additional duty, the intention being that the figure fixed would be sufficiently low to ensure that no paper containing a small percentage of chemical pulp could be imported at the price.

Another method, which we believe the Customs Department could work, would be to require all shipments of papers to be certified for mechanical wood contents. All papers containing less than a certain percentage of mechanical wood (which percentage would be fixed by the Board) would then be subject to the additional tariff rate for superior papers; and paper for newspapers and other purposes containing over this percentage would be assessed at the lower tariff.

We understand that the Customs Department have already an efficient laboratory organization for testing all kinds of imports, and would no doubt be able to undertake the work of testing paper also. We assume that on this system paper would be passed provisionally on these certificates and afterwards tested by the Customs Department for actual mechanical wood contents.

We leave this matter, however, in the hands of the Board who will be in a better position than we to make a decision after they have conferred with the Customs Authorities.

## THE INDIA PAPER PULP COMPANY LIMITED.

B.—ORAL.

### Evidence of Mr. R. H. MUIR, recorded at Simla on 4th July 1924.

The following statement was read by Mr. Muir to the Board with the request that it should be treated as part of the India Paper Pulp Company's case for protection:—

"The Industry was started as a direct result of Government encouragement and is the first real attempt to manufacture pulp and paper on a commercial scale of the best qualities entirely of indigenous raw materials.

The concern was started as a Private Company because until the process was proved a commercial success we should not have been justified in asking the public to subscribe.

The venture would, we believe, have been a financial success without protection had not:—

- (1) the cost of the bamboo far exceeded the estimates,
- (2) the difficulties encountered in bringing the Company to its present stage involved the Company spending far more than its original capital.

It has always been the intention of the promoters to make the Company a public one, inviting participation from Indian shareholders as soon as the future of the concern appeared reasonably assured. We believe that if reasonable encouragement is given to the industry, India will probably become one of the largest paper and pulp producing countries in the world.

In addition to what the India Paper Pulp Company, Limited has put out, much money has been spent in experimentation and unsuccessful ventures, and our successful process may be said to be the net present result of all this. We consider protection justified to an extent as to make India self-supporting and to correct the adverse conditions under which we are labouring to establish this entirely new industry of such great potentialities. These adverse conditions are due to climatic conditions and the present stage of industrial development in India, and also to the expense incurred in adapting expensive machinery to Indian conditions. Unless protection is given to counterbalance these disadvantages, the industry will be quite unable to earn reasonable returns and show prospects of profits that would attract Indian capital."

*President.*—Will you tell us what your position is in connection with the company?

*Mr. Muir.*—I am the Managing Director of Messrs. Andrew Yule & Co., Ltd., who are the Secretaries of the Company. May I say before you start, that we should like to feel that we are not responsible for any part of the communiqué\* which was recently issued by the Board to the Press.

*President.*—I should like to explain the point of view from which we published that communiqué. It seemed necessary to explain to manufacturers that, if they were unable to meet our views as regards the dates for the submission of written statements and the taking of oral evidence, there must inevitably be delay in completing the Board's enquiries, and the sufferers from that delay would be the manufacturers themselves.

*Mr. Muir.*—We have realised all along that we were almost in the position of plaintiffs asking for something from the Court, and we realise too

that we have got to accommodate our convenience to that of the Board. Our convenience is completely secondary to yours. I would like to be assured that no action of ours had anything to do with the communiqué.

*President.*—It would be a little invidious if we pointed out the particular firms who were not responsible for the delay, because the public would be able by a process of exhaustion to ascertain which firms were in fact responsible.

*Mr. Muir.*—We were taking a great deal of trouble to meet your wishes, and I do not like it to be thought that we were in any way the cause for the issue of the communiqué.

*President.*—It was not by way of complaint that the Board issued the communiqué, and it was not aimed at particular firms.

*Mr. Muir.*—The action that occasioned the issue of the communiqué would not act to the advantage of our cause.

*Mr. Ginnala.*—Even so it has not really served the object, because all the mills have not come. We have some reason to complain because the result is that all proceedings in connection with paper have been put off for a month or more, the consequence of which is that the cold weather has been reduced by a month or more during which we are supposed to tour and make our investigations and submit our Report. You can see what it means—it will probably be a month before these proceedings can be published after the preliminary evidence has been taken.

*Mr. Muir.*—I fully appreciate your point of view. I am in sympathy with it. Only I do not want to be the cause of it.

*President.*—It is at any rate clear that your firm has appeared to give evidence on the first date fixed by the Board for your evidence.

In answer to Question 5 you say that your capacity for pulp is 200 tons per month and for paper 240 tons per month. That means that you cannot at present keep the paper plant fully employed with pulp of your own manufacture?

*Mr. Muir.*—Not quite.

*President.*—Then if you desire to get the maximum output of which your plant is capable you must purchase a certain amount of pulp?

*Mr. Muir.*—Yes.

*President.*—Is it purely for that reason that you purchase pulp at present?

*Mr. Muir.*—Absolutely.

*President.*—That will not be a permanent feature of your manufacture?

*Mr. Muir.*—No. Ours is an entirely new process, and we are the first firm in India to manufacture paper from bamboo. It has been experimental to a great extent, and we find that the pulp plant as laid down is not quite of the capacity that we expected it to be. That will be rectified of course if and when we extend our plant.

*President.*—Turning now to Question 7, you tell us that it is not possible to give any one of the various factors that you have mentioned an absolute preference, and that you have to take into account raw materials, markets, labour supply and a plentiful supply of water. I take it this means that the manufacturer has to balance one factor against the other in selecting a suitable site for a paper mill. The important point here is whether the mill should be established in the vicinity of the raw material. Naturally you lay considerable stress on the great abundance of bamboos in India, and you have quoted what Mr. Raitt and Mr. Pearson have said on the point. There can be no question that in one sense the supply of paper making materials is practically unlimited in India. But it is rather a different question to what extent they are commercially available. One very important point that has to be considered is to what extent bamboos which are at a great distance from any source of power can

be utilized, if the paper mill must be established within easy reach of coal, because that factor might rule out a considerable proportion of the raw materials otherwise available.

*Mr. Muir.*—Are you taking entirely a pulp mill or a pulp and paper mill combined?

*President.*—I recognise that both these aspects have to be considered. Let us take a combined pulp and paper mill first.

*Mr. Muir.*—I think almost the first thing I would like to put down—which you have not really touched on individually while you have touched on other considerations—is the question of supervision, because we lay very great stress on supervision.

*Mr. Ginwala.*—Do you mean office supervision or expert supervision?

*Mr. Muir.*—Office supervision, having the seniors of the firm in fairly close touch with the manufactory. In addition, of course, to coal there are a variety of other considerations. There is the question of secondary raw materials: there is the question of labour. As we put our mill we have a nucleus to start on of expert labour, and then there is the question of repairs, stores and so on. Over and above that there is the question of marketing paper and, all things considered, I am inclined to think that if we were erecting our mill again we would re-erect in the same place.

*President.*—It is not so much that I am criticising your choice of a mill-site, but rather that, if mills must be near the coalfields, it may restrict very considerably the extent to which the resources of India are practically available. It might be impossible to utilise the enormous quantities of bamboos available in Burma.

*Mr. Muir.*—It is difficult to give you a reply to that, but there have been two or three attempts to utilise the Burma bamboos in the manufacture of pulp, and they have all had to be abandoned for want of money.

*Mr. Ginwala.*—It is not the fault of the material.

*President.*—What I am raising is a broader point than that. Assuming for the moment that 4 to 5 tons of coal must be used to produce a ton of paper, the cost of manufacture in a paper factory in Burma might be prohibitive.

*Mr. Muir.*—I am of opinion that whether it would be a question of bringing coal to bamboos or bamboos to coal, it would be possible to utilise ultimately the bamboos in Burma. That is the opinion you want to have, I think.

*President.*—I am glad to have it but the matter requires closer examination. It is quite easy in one sense to show that there ought to be a very considerable paper making, or at any rate a pulp making, industry in India, on account of the large quantities of bamboos that are available, but when we are examining the question whether Government should support the industry at the public expense, then a general statement is hardly enough. The matter needs to be investigated in detail.

*Mr. Muir.*—We have not experimented with bamboo in Burma and as far as Burma goes we are unable to help you. You mention coal as a particularly important item. There is also the question of whether wood would be available in Burma—into which I have not personally gone—which might tend to neutralise the disadvantage of coal.

*President.*—There is another possibility of course. You use electric power in your factory but the electric power is produced from coal. To what extent could you reduce your coal consumption supposing you were getting your power from a hydro-electric source or from a public supply company? That is an important question. It might be that hydro-electric power could replace a considerable proportion of coal used. On the Malabar coasts, for instance, hydro-electric power might be quite feasible.

*Mr. Muir.*—I cannot give you that figure here. When I get back to Calcutta I shall send an answer to you.

*President.*—It seems to me a very important question. We have been examining yesterday and this morning a representative of one of the companies depending chiefly on the use of grass. He frankly admitted that, with the use of grass, no great development of the paper or pulp industry in India is possible. The bamboo proposition is far more interesting from the point of view of national interests. Here there are possibilities of an immense expansion which would be extraordinarily important. On the other hand it wants looking into from the point of view, which I have been trying to put to you and to which I attach great importance, namely to see to what extent these bamboos are practically utilisable.

*Mr. Muir.*—Are you having in front of you as one of the witnesses Mr. Kashi Ram? He has a special grass proposition, and I understand from him that hydro-electric power enters very largely into his scheme.

*President.*—Mr. Kashi Ram of the Punjab Paper Mills? They have sent in a written reply, but they are not able to give oral evidence just now as their expert is not here; but, even so, if we had a figure as to the extent to which the coal requirements could be reduced in the case of paper made from grass, it still does not cover, as you are using a different raw material and working a different process. It is important for us to ascertain what quantity of coal is indispensable for the manufacture of paper from bamboo.

*Mr. Muir.*—We are using the sulphite process. The Titaghur Mills, when they started the purchase of their plant for Burma, were, I believe, confident that the soda process would make good pulp out of bamboos, so that the soda process may have a great bearing on the manufacture of paper from bamboo. Would you also like to have information from our managers about the possibility of utilising wood for the balance of the heat required?

*President.*—It would be very useful.

*Mr. Ginwala.*—Does the use of the sulphite process require less coal than the Soda process?

*Mr. Muir.*—I am afraid I cannot tell you that.

*Mr. Ginwala.*—The reason why I am asking you this is this: as it happens your consumption of coal is at least a ton better than the others. It may be due to your equipment?

*Mr. Muir.*—We have got a completely modern plant of course.

*Mr. Ginwala.*—Others also claim that much of their plant is modern. But might that have anything to do with the different process?

*Mr. Muir.*—That again is a thing which I cannot tell you offhand. I have no experience of the soda process.

*Mr. Ginwala.*—Yours is a combination of the soda and sulphite processes?

*Mr. Muir.*—Ours is a modification of the sulphite process.

*Mr. Ginwala.*—I would like to know if the process had anything to do with the quantity of coal used.

*President.*—Supposing the manufacture of pulp was taken up as a separate business from the manufacture of paper, it seems likely that the pulp would be exported, because it is probable that, if the bamboo proposition turns out a success in a comparatively short time, most of the existing paper companies will commence making their own pulp from bamboo, so that there will be only a small market in India for manufactured bamboo pulp.

*Mr. Muir.*—Our intention originally was to manufacture pulp only, but then the uncertainty of the market for pulp made us put in a paper machine.

*President.*—I think it was prudent. It is a big thing to put pulp made from a new material on the world's market in competition with the wood pulp made in other countries.

*Mr. Muir.*—You have got at the same time a limited number of consumers too.

*Mr. Ginwala.*—There is a demand for about 10,000 tons of pulp in India?

*Mr. Muir.*—That is about it.

*President.*—The prices paid at present for wood pulp would not be very remunerative for you.

*Mr. Ginwala.*—That is why they have asked for the protection of pulp.

*President.*—Take it on the basis that the paper and pulp need not necessarily be manufactured in the same place. That is common in the industry, e.g., in Scandinavia.

*Mr. Muir.*—Yes, in Scandinavia and Canada.

*President.*—How far would that be possible or advantageous in Indian conditions? For instance take your own case. How would you have stood if, instead of transporting your bamboos from Chittagong, you had put up your factory there and brought to Naihati the pulp only that you required to make paper there?

*Mr. Muir.*—Balancing up the *pros* and *cons* it would not be as advantageous as the present system.

*President.*—I grant that there may be special reasons during the experimental period to have the works close to the managing agency, but later on, when the process has been fully established and worked out, it may be much more possible to have the pulp mill near the raw materials.

*Mr. Muir.*—On the other hand one has got to consider also the possibility of bringing the cultivation of the bamboo to the factory.

*President.*—I am coming to that in a moment. Are you prepared to give an opinion on the question how far, under Indian conditions, it is possible or advantageous to establish pulp manufacture in the immediate vicinity of the raw materials although the paper mill is near the coalfields?

*Mr. Muir.*—May I take the question like this: "Do you consider that it would be more advantageous to you, when the industry is developed, to establish your pulp factory at Chittagong and your paper factory somewhere near Calcutta?"

*President.*—That would cover it, but I am not asking you for the reasons which led your firm to put up your factory at Naihati. What I have put is a general question.

*Mr. Muir.*—We are still feeling our way to a great extent. We are experimenting and we have been successful up to a point, but we have not experimented far enough to enable me to give a definite answer to your question, I mean a confident answer, but I should be inclined to think that the present arrangement would be more suitable.

*President.*—Even supposing that you were manufacturing a large quantity of pulp for sale? Let us suppose that one quarter of the pulp you manufacture you are going to make into paper yourself and the rest you are going to export.

*Mr. Muir.*—In the case you have mentioned it might be more economical to have the pulp factory nearer the source of supply.

*President.*—One of the factors that would come into that would be the quantity of coal required in the pulp making process as compared with the quantity of coal required in the final paper making process.

*Mr. Muir.*—A larger quantity of coal would go into the pulp making process and I think it is relatively well known that paper making is a simpler process.

*President.*—It is a much simpler and better known process than the new process you are using for making pulp from bamboo. Are you considering the possibility of establishing bamboo cultivation in the vicinity of your mill?



*Mr. Muir.*—When I said vicinity I meant within a hundred or two hundred miles. I was thinking more of up the river. I understand there are big bamboo forests at Murshidabad and bamboo is practically a native of Bengal. We can buy bamboos considerably cheaper than the ones we used, but up to the present we have not made such a satisfactory job of manufacturing from them as we have from Chittagong supplies. There are two possibilities open: one is that the cultivation of suitable bamboos may prove possible and more economical in our vicinity than importing them from Chittagong, and the second is that we may be able to utilise the local bamboo and make it an equally successful job of manufacturing from it.

*President.*—Bengal is a densely populated area, and the total supply of bamboos from the land you could devote to their cultivation at a reasonable cost would not be large.

*Mr. Muir.*—We are at the present time able to buy bamboos—I mean bamboos less suitable for our manufacture—very considerably cheaper than we import from Chittagong.

*President.*—If you were buying in large quantities, you might find the price go up pretty considerably.

*Mr. Muir.*—We have contractors who are prepared to supply us with 2 or 3 thousand tons at the present time. I realise fully as you say that Bengal is densely populated, but bamboos except for certain uses have practically no market. The class of bamboo that we use is not regarded really as of much use and it is possible that even in Bengal there are lots of uncultivated spots which might be utilised for its cultivation when there is a market for it.

*President.*—It might be possible, but until it has been demonstrated in some way I should feel doubtful about it myself.

*Mr. Muir.*—We are making experiments along that line, but it is too early for me to give any answer. At the present moment we are devoting ourselves to see whether the bamboos we can utilise can be grown locally at a reasonable figure. But as I say the only answer that I have got to your question is that we have been able to get an assurance from our contractors that they are prepared to supply 2 or 3 thousand tons of bamboo at a reasonable figure.

*President.*—Even supposing it was so, that does not solve the whole question. What it would come to is this that you would be getting a little more use out of the soil of Bengal, but you would not be utilising the enormous reserves of material which are at present going to waste in more out of the way parts.

*Mr. Muir.*—We are hoping to get considerable reductions from our reserve. We have not the figures yet to prove that we shall. The figures which led us to go there were given chiefly by the Government experts. If we could attain these figures we should not be asking for protection at the present time and should be able to manufacture at a profit. We are experimenting there side by side along with experiments in Bengal. In that connection I have got here a note, more or less a history, of our taking up the concession in the reserve, and in it you will find that when the Government expert went with our representative, it was estimated that the cost per ton landed of bamboos would be Rs. 12-2 a ton at Chittagong. At that price we would be able to manufacture at a good profit to-day.

*President.*—That is just one of the matters in which the predictions of experts are apt to be falsified, because you yourselves introduce a disturbing factor into the district which upsets all the calculation about the cost of labour and so on.

*Mr. Muir.*—It is rather my feeling about that which makes me hesitate very much to give absolutely definite answers to your question as to what the effects would be of putting a pulp mill in the neighbourhood of the bamboos.

*President.*—In answer to Question 8 you have given the percentages of your outturn of different kinds of paper and you say "On account of experimental manufacture, previous records would not be of value, and in our opinion, future records will show increased percentage in all superior qualities to the exclusion of Badami and Brown." What is the reason for that?

*Mr. Muir.*—As we advance we have fewer and fewer experimental failures, and experimental failures (usually in the cooking of the bamboos) mean more Badami and Brown. We can make (and the Government experts will bear us out) as fine a paper as any made in England, and as there is very little saving, it clearly does not pay us to make inferior qualities.

*President.*—Does it not come to this that Badami and Brown can be made from cheaper materials, hemp, jute and so on? So to speak bamboos should naturally be used for making better class papers. But there will always be a certain proportion of rejections amongst the pulp made from bamboos, and from these you will always make a certain amount of Badami and Brown.

*Mr. Muir.*—We have to make some Badami at present because many of the dealers insist on getting it, but the bulk of it comes from experiments. In time we do not expect to make any.

*President.*—Apart from what your factory may do in the future, supposing the manufacture of paper was firmly established in the country, do you think that the Badami and Brown would usually be made of other materials?

*Mr. Muir.*—It is quite possible.

*President.*—Is it because paper can be made more cheaply from them on the whole?

*Mr. Muir.*—I understand there is a great difference between making Badami and better class of paper by other mills which use the soda process and ourselves. We use the sulphite process.

*President.*—If you have to use this particular material and this particular process, then you have got to manufacture better quality of paper?

*Mr. Muir.*—It pays us better.

*President.*—In answer to Question 10 you say, that the Indian manufacturer has to make a larger variety of papers than a manufacturer in a Western country. Do you think that state of things is likely to continue for a considerable time?

*Mr. Muir.*—Of course the evil lessens with the increase of your plant. Supposing you have got to make 4 sorts of paper. It is much less of a set-back to your output if you can make them from two or four machines than if you have to make them out from one. That is a partial answer to your question.

*President.*—The question is whether the Indian bazar dealer's character is likely to be modified in a short time, or whether he will go on insisting that, if he comes to a manufacturer for one kind of paper, he must be supplied with other kinds of paper by the same manufacturer.

*Mr. Muir.*—If the industry develops and one mill specializes in a particular kind of paper and another mill in a different kind, he will find that it pays him better if he buys from different mills. I expect he will always have to get different qualities as at present.

*President.*—In the second half of the answer to this question you say "the manufacturer has a severe handicap to face on account of the very large proportion of light weight papers demanded in this country." What occurred to me was that, if the foreign manufacturer does not manufacture these lower grades, then these papers are exempt from foreign competition.

*Mr. Muir.*—But in practice we do not get a proportionately higher price.

*President.*—Supposing you tried to get it, is internal competition sufficient to keep down the price, or would consumers instead of using the light weight use the heavy weight? Or is it purely governed by custom?

*Mr. Muir.*—I think it is largely governed by custom. We do get a better price than the imported dealer for our paper as a whole, and it is possible that is one of the reasons. There are other reasons as well.

*President.*—I understand that there is a sort of customary difference in price between imported and Indian made paper.

*Mr. Ginwala.*—I would like to know a little more about the history of your works, as to how you started them and so on.

*Mr. Muir.*—The industry really started as a result of Government encouragement and as the first real attempt to manufacture pulp and paper on a commercial scale from bamboos entirely out of indigenous materials. The concern started with a private company because, until the process proved a commercial success, we could have had no justification in asking the public to subscribe. The venture would already have been financially successful had not (1) the cost of bamboo exceeded the estimate, and (2) the difficulties encountered in bringing the company into its present stage, involved it in spending far more than its original capital. It was always the intention of the directors to make the company a public one, inviting participation from Indian shareholders as soon as the future of the concern appeared reasonably assured. We believe that, after reasonable encouragement is given to the industry, India will probably become one of the largest paper and pulp producing countries of the world. In addition to what the India Paper Pulp Company has spent, much money has also been put in experimental and unsuccessful ventures, and our successful process may be said to be the result of all this expenditure. We consider protection justified only to an extent to make India self-supporting.

*Mr. Ginwala.*—What I wanted to know is how you got on to this business.

*Mr. Muir.*—What directed our attention to it first of all were Mr. Raitt's, and subsequently Mr. Pearson's, experiments. Government appointed a cellulose expert and a forest economist, I understand, with a view to finding out what utilisation could be made out of India's forests. It was largely as a result of these gentlemen's investigations and the figures they put forward that we went into this matter.

*Mr. Ginwala.*—Did you, with reference to the conditions of the days in which the reports were made, find these figures to be accurate?

*Mr. Muir.*—Quite inaccurate.

*Mr. Ginwala.*—That is what we want to know.

*Mr. Muir.*—When our representative went round the Kasalong Reserves in 1919, it was estimated that the total cost per ton of suitable bamboo landed at Chittagong would be Rs. 12-2 per ton.

*Mr. Ginwala.*—They also worked out certain costs of other things, did they not?

*Mr. Muir.*—Mr. Pearson worked out figures entirely on the soda process. I understand he put up an experimental soda boiler in Dehra Dun. Our process is quite different and so I cannot really compare them at all.

*President.*—You were not acting on his calculations in the matter?

*Mr. Muir.*—As regards the utilisation of the bamboo we relied on their figures for the costs, but we depended entirely on the process which was evolved by Mr. Jardine of Penicuik and which has been, after a series of experiments, completely successful.

*Mr. Ginwala.*—Apart from the question of cost, would you accept as correct or not their treatment of the question from the forest point of view, that is, as to the behaviour of the bamboo, ways of its growth, its abundance and so on?

*Mr. Muir.*—Do you mean the availability of the bamboo?

*Mr. Ginwala.*—Yes.

*Mr. Muir.*—Our Reserve being a very big area we have not the means of estimating it. It is a very big area, I think about 420 square miles, and we have only touched the fringe of it, but we have no reason for doubting their estimates.

*Mr. Ginwala.*—You know, one of the things that is urged against the bamboo is its flowering habit.

*Mr. Muir.*—In our reserve, if we treble or quadruple the size of our plant, we should be able to be independent of flowering on account of the various different species which we are able to utilise.

*Mr. Ginwala.*—What Messrs. Raitt and Pearson suggested was that cultivation should be so arranged that you could always get over the difficulty. Do you accept that as a general proposition?

*Mr. Muir.*—As far as I can tell you, in our area we believe we have sufficient of the other varieties to tide us through when our main staples are flowering. If we were cultivating we could arrange it so that we should not be inconvenienced by flowering, so that we should not have to close down our works on that account.

*Mr. Ginwala.*—We are investigating the question from a broader point of view. Supposing the industry has to be established in this country, the country has got to make a certain amount of sacrifice. We have got to consider whether it is worth while making that sacrifice.

*Mr. Muir.*—Would you please amplify your question?

*Mr. Ginwala.*—We have only two authorities on this—yourselves and the Government experts—as to the possibility of bamboo, and we want to check the one by means of the other. I want to know whether you really think that the forecast made by the experts is reasonable and is one that can be realised as to the availability, suitability, accessibility and the like of the bamboo.

*Mr. Muir.*—As far as we can say, yes.

*Mr. Ginwala.*—The Government of Bengal say this forest was estimated to yield per annum 240,000 tons of bamboo. They say that the estimate is optimistic. You go up to 4 or 500,000 tons. Can we accept your estimate as a reason for supposing that for the industry as a whole bamboo is a sufficiently good raw material?

*Mr. Muir.*—After allowing for possibilities in connection with flowering and so on I maintain that there is sufficient bamboo in Bengal to support a very large industry at a reasonable cost.

*Mr. Ginwala.*—When you say Bengal you mean the Chittagong Hill Tracts?

*Mr. Muir.*—The Chittagong Reserves, and I know a little about the Silchar bamboo areas also.

*Mr. Ginwala.*—But the Government of Bengal tell us in this letter that, except in the Chittagong Hill Tracts, there is no suitable supply of bamboo for the manufacture of pulp in Bengal.

*Mr. Muir.*—I do not think that is an estimate in which they are quite correct. To-day I can make a contract for 3 thousand tons of bamboo to be delivered at our mill. But perhaps that is a quantity the Government of Bengal would disregard in their reply.

*Mr. Ginwala.*—That would be from people who really take them for domestic use and sell them. People want to use a certain quantity of bamboo from all forests?

*Mr. Muir.*—Yes.

*Mr. Ginwala.*—There is always a certain quantity of bamboo which you can get?

*Mr. Muir.*—We cannot get the *dolu* bamboo that is used for floating down the grass.

*Mr. Ginwala.*—That is the difficulty. Does it grow anywhere or does it grow in particular parts of forests?

*Mr. Muir.*—It grows in the same parts as the other species.

*Mr. Ginwala.*—Can you prevent people from taking the other species?

*Mr. Muir.*—You mean the local inhabitants?

*Mr. Ginwala.*—Yes. In Burma that was the real difficulty. People would insist upon getting their bamboo from the most accessible part naturally.

*Mr. Muir.*—We have not found that a great difficulty so far, but of course the quantities we have taken are so small that probably we would not have minded it to some extent.

*Mr. Ginwala.*—With regard to the location of your mill I could not really follow why you put your mill at Naihati.

*Mr. Muir.*—You cannot give figures to prove the advantages of the location. You have got to balance in your own mind your position as regards your raw material, your position as regards coal and so on.

*Mr. Ginwala.*—You are discussing the question from an abstract point of view. I want to know why you followed this course.

*Mr. Muir.*—We had to balance all these considerations and we thought the site where our factory is the most suitable place. If you tell me what sort of an answer would meet your question, I might be able to give that.

*Mr. Ginwala.*—It is very difficult for me to say. Some people have said that they are in very close proximity to the coal; they use 5 to 6 tons of coal for a ton of paper, and do not think that the freight on the raw material would be much greater than the freight on the coal.

*Mr. Muir.*—In the case of the Bengal Paper Mill at Ranigunge I think the freight on most of their grass was cheaper in addition to their being at the coal pits' mouth.

*Mr. Ginwala.*—Would you put all the things together and say here are so many advantages and balance them against the disadvantages? Suppose you were starting a mill now—forget you are at Naihati—on what basis would you select your site?

*Mr. Muir.*—I am sorry if I am being stupid about it, but I do not quite follow.

*President.*—We are trying to enlighten our own minds.

*Mr. Muir.*—What you are trying to do is to boil the question down into figures. I think that it is almost impossible to boil down everything to figures.

*President.*—If I were taking part in the decision I should certainly ask for a great many figures as regards freight and see just what it meant. If I put up a factory at Chittagong I should have to carry my coal there which would cost so much, and *vice versa* if I erected a factory at Calcutta I should have to carry my bamboos from Chittagong. I don't say that you were wrong in your decision, because you are using less coal than some of the other mills.

*Mr. Muir.*—Then you have a certain number of other considerations which I don't think you can boil down to figures.

*President.*—That may be so.

*Mr. Ginwala.*—There are various authorities on that point. Many of them say that pulp must be manufactured in proximity to the raw material. Mr. Sindall is one of them who says that. In foreign countries, pulp is manufactured in close proximity to the raw material. You have not done that, have you?

*Mr. Muir.*—No.

*Mr. Ginnala.*—We want to know why you did not do it if that is taken as a principle.

*Mr. Muir.*—As I said to the President, it might be equally or more advantageous, if we were manufacturing pulp only and manufacturing it for export largely, to put down the plant at Chittagong.

*Mr. Ginnala.*—But at that time you did contemplate manufacturing pulp only?

*Mr. Muir.*—Yes, but not for export. It was entirely for local consumption.

*Mr. Ginnala.*—Does it make much difference?

*Mr. Muir.*—I think so because you see you have got to transport all your pulp then, *via* Calcutta. There are only two mills which could use our pulp. One is the Titaghur mill and the other is the Bengal Paper Mills, and you have got to transport your pulp from Chittagong, where the pulp would be manufactured, to or near Calcutta, so that the disadvantage really only boils down to the difference between transporting your pulp and baling and transporting bamboos, as we do.

*Mr. Ginnala.*—I suppose that you have seen the report of Mr. Raitt on the Cuttack project?

*Mr. Muir.*—No, I have not.

*Mr. Ginnala.*—It is a pity you have not seen it. There are some things in it which might interest you.

*Mr. Muir.*—I would like very much to study it.

*Mr. Ginnala.*—In any case Mr. Raitt says there that it would be a better proposition to manufacture pulp at Cuttack and take it to Calcutta or Rangoon.

*Mr. Muir.*—Mr. Pearson also says a similar thing in his book entitled "Utilisation of Bamboo."

*Mr. Ginnala.*—Yes, I know that Mr. Pearson is of the same opinion. Mr. Sindall is also of the opinion that the exploitation of any new fibre will involve a recognition of the fact that the raw material must be converted into pulp at or near the place where it is most abundant. You have departed from that principle, and therefore I thought that there might be some explanation.

*President.*—Let me put it in another form. In Scandinavia all the firms that manufacture pulp for export do so in the immediate vicinity of pine forests, but it is quite possible that in some material respects the conditions are different in Scandinavia. In Scandinavia there is plenty of hydro-electric power available and as far as I know in Chittagong there is no electric power. That is the kind of thing we are trying to get at.

*Mr. Muir.*—I should like to hark back to the question of supervision which is more important in this country than it is in a place like Scandinavia or any other European country.

*Mr. Ginnala.*—That is because a big firm like yours goes in for so many different industries. The Scandinavian firm would on the other hand manufacture pulp only.

*Mr. Muir.*—The firms out here have to consider the very expensive question of having a head office, at any rate for a number of years. Until they trained the Indian labour to take the place of Europeans, that expensive office would more than counterbalance placing their pulp factory at the sources of supply.

*Mr. Ginnala.*—The thing is that yours is a new industry. You are pioneers. Yours is a very big firm. The question is whether, if many people adopted the same principle, it would be really a good thing.

*Mr. Muir.*—Messrs. F. W. Heilgers & Co. are a very big firm and they have not yet been able to complete the experiment. They went on the opposite tack.

*Mr. Ginnala.*—Are they going to manufacture paper and pulp together?

*Mr. Muir.*—I understand that they are going to manufacture pulp there and are going to transport it to the factory at Titaglmr.

*Mr. Ginnala.*—That would be in accordance with the principle.

*Mr. Muir.*—Yes, it would be in accordance with the recognised authorities.

*Mr. Ginnala.*—They are not able to carry it through.

*Mr. Muir.*—I understand that is a question of money.

*Mr. Ginnala.*—But you yourself, I take it, would not do it. You have said just now that you would do the same thing if you were to start this business over again.

*Mr. Muir.*—Yes. To meet the President's theoretical question, whether if we were going to export a large proportion of our pulp we would not establish ourselves near the source of supply, that would require fresh consideration of the whole circumstances and working out figures which might take a month or two.

*Mr. Ginnala.*—But you would not follow Mr. Raitt's suggestion?

*President.*—I would like to put this to you. When we go to Dehra Dun we shall ask Messrs. Raitt and Pearson for their reasons. If you have got good reasons on the other side, we would like to be able to put those reasons to them. You simply say that you were right. If we put that to them, they won't be able to say anything at all.

*Mr. Muir.* Any opinion that I may give or that they may give will be entirely theoretical. The only way to do it is by actual proof. I hope that Mr. Alwar Chetty of the Carnatic Paper Mills will be working soon on the other tack to us.

*President.*—Do you know the reasons why the system has developed in Europe or America? The manufacture of pulp in those countries goes on at different places from those where the manufacture of paper is carried on. You must have some sort of information.

*Mr. Muir.*—I think that their raw material is less easily handled. We bale up our bamboos and it does not make a very bad freight. Their raw material would be exceedingly difficult to transport as raw material to places where paper is made. I take it that it is possibly one explanation.

*President.*—That is a perfectly reasonable explanation if it is a case of moving whole pine trees. We are not getting much further. If on thinking it over anything further on the subject occurs to you, we shall be grateful if you can write to us.

*Mr. Muir.*—I would like to think it over. I might be able to write something about it. It is impossible to come up here armed on all points. I have not thought this particular aspect over seriously.

*Mr. Ginnala.*—The reason why we are particular about this is if India is going to produce a large quantity of pulp, it can only be for export purposes. In that case, is it possible to have your factory at or near the source of supply of your raw materials?

*Mr. Muir.*—You have got a very considerable room for expansion in the country itself.

*Mr. Ginnala.*—Not very much judging by the present figures. They do not come to anything on which you can build up a huge industry.

*Mr. Muir.*—You can build up a pretty big one.

*Mr. Ginnala.*—In reply to Question 9, you say "Indian raw materials and Indian demand create most favourable conditions for the manufacture of white printings and coloureds, book papers, engine sized and ledger papers." Is there any really very great demand for these in the country? Can you say what the demand is?

*Mr. Muir.*—The best guide that we can give you is our answer to Question 8 showing the percentages of our total output.

*Mr. Ginwala.*—The reason why I am asking you is this; You are competing more or less in the same class of paper in which the other Indian manufacturers are competing against the foreign manufacturer. Then the question arises whether there is really room for the expansion of the market if you are all going to make the same thing.

*Mr. Muir.*—We can manufacture anything that is demanded in this country. We can manufacture any paper provided there is a sufficient demand. The only qualities that cannot profitably be manufactured for some time to come are newsprints.

*Mr. Ginwala.*—There are various other things which you don't manufacture and which these other people don't manufacture likewise. Take the case of packing paper and also printing paper which includes a considerable quantity of newsprints. Newsprints you cannot manufacture, but you can manufacture packing paper?

*Mr. Muir.*—Yes.

*Mr. Ginwala.*—Then there are envelopes.

*Mr. Muir.*—In that case it is only a question of cutting up. We can manufacture the paper. One envelope mill is in course of construction or has been constructed.

*Mr. Ginwala.*—When the paper manufacturers say that 55,000 to 60,000 tons is imported, there is a considerable quantity which we cannot ascertain, which cannot be made in this country or which people are not disposed to manufacture.

*Mr. Muir.*—I can say that we can manufacture any sort of paper provided there is sufficient demand for it. You can divide the classes of paper that we would not manufacture into newsprints and specialities. Specialities would come to about 500 tons a year.

*Mr. Ginwala.*—There is no question of your being able to manufacture, but you should be able to manufacture at a reasonable cost to capture the market.

*Mr. Muir.*—We would be able to manufacture at a relatively reasonable price where there is a reasonable demand. If there is a demand for a certain very special kind of paper for one ton, it naturally does not pay to make it.

*Mr. Ginwala.*—What do you call a reasonable demand? I am not thinking of small orders at special rates. Supposing I was to place a special order, so that I should get ordinary rates, how big should it be?

*Mr. Muir.*—Completely special which nobody used to manufacture!

*Mr. Ginwala.*—If I give you a special order, you want a special price, is not that so? What is the smallest order that you can take without asking for a special price?

*Mr. Muir.*—I should say five tons.

*Mr. Ginwala.*—That is not a very big quantity. With regard to Question 11 about your process: have you adopted it because it lent itself better to the utilisation of bamboo or was it due to its cheapness?

*Mr. Muir.*—It has always been said so far that the sulphite process was impossible for bamboo and impossible in a tropical country. The sulphite process produces a superior pulp. It is not a question of cheapness. Ours is the first sulphite process that has been possible for bamboo in a tropical country.

*Mr. Ginwala.*—You did not take it up as a challenge to expert opinion. You must have taken it up as a commercial proposition.

*Mr. Muir.*—Yes, the sulphite process makes a very much better pulp and is, I believe, more economical than the soda process.

*Mr. Ginwala.*—You say that it is a success.

*Mr. Muir.*—Yes.



*Mr. Ginwala.*—If it is a patent process, it does not lead to the expansion of the industry. Are you prepared to give licenses for the use of your process?

*Mr. Muir.*—We have license from a parent company. That is a matter that will have to be referred to them.

*Mr. Ginwala.*—The position resolves itself into this. Other experts recommended the soda process. You have discarded it. You are the only person manufacturing pulp from bamboo. You are using a special process which makes it a success. Now nobody else can work it without a license. Will the industry be able to expand under such conditions?

*Mr. Muir.*—The question of giving a license I imagine will be a question of terms. It would have to be referred to the parent company from whom we hold our license but, whether they give a license or not, surely it should not check the industry because the manufacturers who use the soda process are firmly of opinion that they can make bamboo pulp successfully.

*Mr. Ginwala.*—So far nobody has made it on a commercial scale.

*Mr. Muir.*—Nobody has got to the manufacturing stage at all apart from us. It has not been a question of failure of a process. It has been a question of money.

*Mr. Ginwala.*—I am asking you about the process. The experts have said that the soda process is a good process. You have not adopted that process. These other people who recommend the soda process have not manufactured pulp on a large scale by that process. Now supposing we were going to recommend protection to this industry on the basis that bamboo is a good raw material, which process should we rely on?

*Mr. Muir.*—I am not in a position to bind the parent company from whom we hold our license, but I am of opinion that they would be willing to grant licenses on terms.

*Mr. Ginwala.*—Will the terms be reasonable?

*Mr. Muir.*—They would be reasonable from their point of view.

*Mr. Ginwala.*—Since I have read this answer I have felt that if the success of the industry depends on a patent process, it is not going to be without difficulties.

*President.*—There are two questions I would like to ask you in this connection. Is the process patented in India?

*Mr. Muir.*—Yes.

*President.*—There is, I believe, legislation in England under which the holders of patents can be compelled to grant licenses for manufacture. As far as I recollect, there is no legislation to that effect in India, but I think that, if this question is brought before the Legislature, there would be a strong movement for introducing legislation of that kind. We want you to appreciate the importance of the matter. After all protection will be given, if it is given, in the national interests, and these will not be served if the manufacture is to remain in the hands of a single firm. Unless there is a wide expansion, a growing utilisation of India's natural resources, the object of protection is not secured. For this reason I think it is probable that there may be a strong feeling in the country when the matter comes before the constituted authorities.

*Mr. Muir.*—I think that it would be quite foreign to the reputation of our firm, if we were to hinder the national development of the country in any way.

*President.*—I am not suggesting that.

*Mr. Muir.*—We should be if the patent were in our own hands. It is in the hands of people at Home but, if we were to advise them or help them not to give out licenses, we should be hindering the development of the country.

*Mr. Ginwala.*—We don't say that you would. Our point is this. Here is India. It has got very fine raw materials in its possession, but it cannot make any use of them unless the license can be had. The patentee is

not an Indian subject. He is not subject to Indian legislation. The position of the country and the Board will be very difficult. We don't say that you would do anything which will increase the difficulty, far from it. In making any recommendations we must find that this industry had raw materials which could be used commercially, but if this process is the only process by which the industry can be successfully carried on, we must qualify our recommendations.

*Mr. Muir.*—You would be premature in saying that.

*Mr. Ginnwala.*—We do not know. The moment that it is a patent that is used, it means it is a more expensive process than a process which is not a patent process.

*Mr. Muir.*—The people who developed that process are entitled to some benefit on their discovery, and I do not think that from my knowledge of the parent company, you will find them in any way unreasonable. Is that a satisfactory answer?

*Mr. Ginnwala.*—As far as it goes.

*President.*—The point would arise that after all, if once protection is given, it is given, and then it is too late so to speak to make terms. It seems to me that the parent company will have to face the possibility that the Legislature would insist on legislation being simultaneous as regards the power to compel a patentee under certain conditions to grant licenses.

*Mr. Ginnwala.*—There is one other alternative, viz., that we should be satisfied that the other process, I mean the soda process, was equally good.

*Mr. Muir.*—Supposing protection was granted, would not the legislation be held up until it was found whether there were other processes suitable?

*President.*—Provided all the other various conditions are satisfied. Where one process has been demonstrated as being adequate, there is no reason for waiting. I gather from what you say that you want to go ahead.

*Mr. Muir.*—We will go ahead on our own lines.

*Mr. Ginnwala.*—You have spent a good deal of money on experimenting. Are you prepared to express any opinion on the soda process?

*Mr. Muir.*—Our experiments have been conducted on the sulphite process only.

*Mr. Ginnwala.*—You never attempted the soda process?

*Mr. Muir.*—No.

*Mr. Ginnwala.*—It seems to me that you have done well. You started with the official reports in which there is no reference as far as I remember to the successful application of the sulphite process.

*Mr. Muir.*—We only relied on them for raw material. The people who evolved the process knew more as regards the manufacture.

*President.*—Am I not right in saying that the process was patented before the war?

*Mr. Muir.*—I am not quite sure about that. I think it was.

*President.*—If so, it would indicate that the exploitation of this process was part of the original idea all along?

*Mr. Muir.*—Yes.

*President.*—I imagine from the fact that the process is patented in Mr. Nelson's name as well as in the name of Mr. Jardine, that, as a paper manufacturer, he was closely interested in the utilization of the process.

*Mr. Muir.*—Mr. Nelson and Mr. Jardine are closely connected in business.

*President.*—Mr. Nelson and Mr. Jardine would naturally be interested from that side primarily, I mean from the side of utilising this particular process. I imagine work had been going on for some years before it was patented.

*Mr. Muir.*—I suppose that it is the natural inference, but I am not in a position to answer that. It was the probability of cheap bamboos that made them choose India for carrying on their experiment on a commercial scale.

*President.*—The process had apparently been patented before there was any decision where the mill was to be established.

*Mr. Muir.*—I am not quite sure.

*Mr. Ginwala.*—In answer to Question 96, you have put down the price of patent rights as Rs. 3,80,000. If it costs every company that amount, it seems a large sum. There is probably a royalty payable on production in addition.

*Mr. Muir.*—We don't pay any royalty.

*Mr. Ginwala.*—It seems to me that it may be rather a handicap to others.

*Mr. Muir.*—To all.

*President.*—If the other process also turns out to be suitable, the extent to which you can charge royalties will be strictly limited by the competition of the markets.

*Mr. Muir.*—Yes. It of course depends on the relative values of the processes.

*Mr. Ginwala.*—You say that the Titaghur people have also experimented on bamboo.

*Mr. Muir.*—Yes.

*Mr. Ginwala.*—Do you know whether they have done so with the soda process?

*Mr. Muir.*—There is soda process. I understand that they believed that theirs was a better process.

*Mr. Kale.*—What process is being tried at Dchra Dun?

*Mr. Muir.*—The soda process.

*Mr. Kale.*—Are we to take it that it is your opinion that the bamboo pulp is suitable for higher grades of paper than other materials in India? Is that your opinion?

*Mr. Muir.*—Yes.

*Mr. Kale.*—Sabai grass and other materials are not so suitable for the manufacture of better grades of paper?

*Mr. Muir.*—Bamboo is superior for the better grades of paper.

*Mr. Kale.*—In answer to Question 10, you refer to the bazar people. Are you referring to the middlemen or the wholesale dealers?

*Mr. Muir.*—The middlemen.

*Mr. Kale.*—A middleman who is selling to smaller dealers naturally wants to stock a larger variety?

*Mr. Muir.*—He is accustomed to stock a larger variety and he does so.

*Mr. Kale.*—You don't deal with small dealers?

*Mr. Muir.*—No.

*Mr. Kale.*—In the same answer later on you refer to the handicap which the Indian manufacturer has to face on account of the very large proportion of light weight papers demanded in this country. I remember something about Austrian paper, very thin paper, which used to come into this country before the war, which was very popular in India with the mass of the public. Is that the kind of paper you refer to?

*Mr. Muir.*—I am afraid I cannot answer that question.

*Mr. Kale.*—Do you know the Elephant brand paper which is also very thin?

*Mr. Muir.*—I am afraid I cannot answer that.

*Mr. Kale.*—I was just asking you how it is possible for those manufacturers to sell that kind of paper at a small price.

*Mr. Muir.*—I understand that a large proportion of the Home imported paper for the bazar consists of the heavier weights.

*Mr. Kale.*—I happened to know these two types of paper. Therefore I am asking you how it is possible for them to manufacture and sell in India at such low cost.

*Mr. Muir.*—I am afraid I cannot answer.

*Mr. Kale.*—You said that the bamboo crop could be renewed every seven years. Has that been established by experiments, or is it only an estimate?

*Mr. Muir.*—It is the result of something more than an estimate. I think it is the result of actual observation and I believe most people hold that it can be renewed oftener.

*Mr. Kale.*—It is of importance. You rely much upon the continued supply of these raw materials, and unless it were possible for the Forest Department to grow more forests and keep up the supply, the supply of your raw material would not be maintained.

*Mr. Muir.*—I understand: that is the result of actual observation by Forest officers.

*President.*—That is my impression too.

## II. RAW MATERIALS.

*President.*—You have told us in answer to Question 5 that your capacity for pulp is 200 tons a month or 2,400 tons a year, and you have told us in answer to Question 14 that approximately 2½ tons of bamboo are required for one ton of unbleached pulp. On that basis taking 2,400 tons of pulp, it ought to be 5,400 tons of bamboo. The figure you have actually given is 5,000.

*Mr. Muir.*—It is an approximate figure.

*President.*—I want to know which is correct. It is better that the figures should be consistent.

*Mr. Muir.*—You can take it that 40 to 42 per cent. is the yield of a ton of dry bamboo.

*President.*—Still you require rather more than 5,000 tons for the full capacity.

*Mr. Muir.*—It should be 5,400 to be more accurate.

*President.*—In Question 16 there is a quotation from a paper read by Mr. Raiff in which it is said "It is a modest estimate to say that from bamboo, taking only that which is available under possible manufacturing conditions, Burma, Bengal and Southwest India, could produce ten million tons of pulp per annum." That again is the very point we were on at the beginning. In one sense it is quite true, and in another sense it may be quite misleading. The whole question is what quantity you can utilise at a cost commercially possible, and if you are right that the best place for a pulp mill is somewhere in the neighbourhood of Calcutta, it is a discouraging fact, because it means that a great proportion of the bamboos cannot be utilized.

*Mr. Muir.*—I take it in course of time, supposing the bamboo paper industry developed, you would find factories as you do in England and elsewhere, located in various places over the country.

*President.*—But it may be that there are limitations owing to the difficulty of supply of power or fuel. In proportion to most manufactures the quantity of coal required per ton is very large and this makes the question very important.

*Mr. Muir.*—Other commercial people have considered various other sites as suitable. Ours is the only factory put down to develop a certain area of raw material. Just now you have got Heilgers who believe that Rangoon is a desirable and a good commercial site, and I understand that a concession was given further away from Rangoon to Jamal Brothers and a concession was also given in Arakan.

*President.*—Very likely, but that is not my point. We hope to get some assistance from you on that.

*Mr. Muir.*—I think you are asking a good deal. If I went away and worked it out and considered it carefully from all these points of view, then I could write to you a very comprehensive answer. The first thing we considered was what was the most favourable site to put down the first factory for manufacturing pulp from bamboo. All these other sites that you alluded

to will have to be considered on the merits, and it would require a good deal of figures to compare the relative merits and values of each particular site.

*President.*—What arguments do you think will eventually prevail? That is what it comes to.

*Mr. Muir.*—I can say this that, with protection and encouragement, it is possible to establish on the banks of Hooghly what will be eventually a sufficient number of paper or pulp mills to supply the requirements of India.

*President.*—I think it would be undesirable that they should all be established in Bengal or Bihar. In that case the manufacturer might not be able to command the southern markets.

*Mr. Muir.*—I understood you to be referring to that particular place and to the quantity of bamboo available. I am only alluding to one area of bamboo and to the extent that it could be developed.

*President.*—Then we come to Question 20 about the cost per ton delivered at the mill of the primary raw materials. You have explained your inability to give any detailed figures, even in confidence. You have given the royalty that we asked for and you have given the total freight. You say "while we have a concession rate for the importation of bamboo from the reserve from the Railway and Steamer companies, this item is a very heavy charge on the cost of our primary raw material. The concession rate first quoted us in 1919 was Rs. 7 per ton, whilst to-day it has risen to Rs. 8-7-0. The balance of course must cover labour and miscellaneous charges and the freight down the Karnafuli river and the baling.

*Mr. Muir.*—Also the crushing as well as the baling. There is cutting and rafting and then it is baled and despatched to Chittagong, and from Chittagong it has to be landed and then there is the freight to Naihati.

*President.*—The point is whether it will be to your advantage to persist in an extreme reserve on these matters. It is of course for you to decide.

*Mr. Muir.*—Shall I give you the figures in confidence?

*President.*—Certainly you can if you like, but I do not understand what it is you apprehend from the disclosure of these figures. Are you thinking of the people who are manufacturing at the moment, or the people who may take up the manufacture hereafter, i.e., the future competitor?

*Mr. Muir.*—Yes.

*President.*—I can understand that in a certain sense, but, after all, your position is this, you are asking Government to come to your assistance at the expense of the tax-payer. In that case I think a certain amount of disclosure is essential, and particularly when the risk is not disclosure of information to actual competitors but only to potential competitors.

*Mr. Muir.*—Of course there is a good deal of difference from our point of view between disclosing in confidence to you and having the figures published, when they may be ready for reference for anybody who may think of manufacturing pulp from bamboo at a future date.

*Mr. Ginwala.*—Your figure is not a figure that will encourage any man to come into the industry. If I were you I would publish it broadcast.

*President.*—The most important thing in this case, I quite admit, is the total figure, but it is still desirable to have details.

*Mr. Ginwala.*—These gentlemen (Messrs. Pearson and Raitt) have published their figures, and you have found them to be inaccurate on some material points.

*Mr. Muir.*—We have not attained to their figures so far.

*Mr. Ginwala.*—The most important figure in this connection is their cost of raw material, and there they have not been right. You have got to be quite frank about it.

*Mr. Muir.*—Our experience so far has shown that.

*Mr. Ginwala.*—That experience you propose to keep to yourself by not publishing it. What happens? Our report goes before the Assembly where Mr. Raitt is quoted with his Rs. 30 a ton for 2½ tons of bamboo delivered at the mill against your Rs. 50 a ton. The Assembly may well say that you did not know your business.

*Mr. Muir.*—Here are our figures: I am prepared to give them over to you.

*President.*—As Mr. Ginwala has pointed out your figures will serve as a check on Mr. Raitt's figures. [The figures were handed over to the President.]\*

*Mr. Ginwala.*—You yourself have given Rs. 12-8-0 a ton.

*Mr. Muir.*—I give it as a rate that was given by Mr. Pearson. Our man went up with him and Mr. Pearson was the expert who gave the rate.

*President.*—You have told us that bamboo is better than grass for higher classes of paper. Is there any class of paper where grass is definitely the material indicated.

*Mr. Muir.*—It is not better for any quality but would make the lower grades equally well.

*President.*—Why is it that the British manufacturer still manufactures a certain amount of paper from esparto grass? Is it not because esparto grass is more suitable for certain classes of paper?

*Mr. Muir.*—Esparto grass is more suitable for certain kinds of paper because it is a little bit stronger.

*President.*—That applies between esparto grass and wood pulp. Would it not apply as between *sabai* grass and bamboo?

*Mr. Muir.*—I think the *sabai* grass paper may be a little stronger, at present. We are a little short of beating power in our mill, and when we get another beater our paper will be just as strong. That is the only point in which the *sabai* grass could be said to have any advantage.

*President.*—At the end of the answer to Question 30 you say "We can safely state that pulp can be manufactured from practically any class of bamboo." That rather takes me aback. I understood it was only certain kinds of bamboo which were suitable.

*Mr. Muir.*—We can manufacture from any class of bamboo, but we cannot manufacture economically.

*President.*—I do not doubt it, and I do not think that anybody would challenge that you could make paper at a price from any class of bamboo. The question was "What are the primary classes of bamboo you consider suitable for the manufacture of pulp?" The answer was "we do not feel that our experiment has gone far enough to make a comprehensive answer", and you go on to say that pulp can be manufactured from practically any class of bamboo. I now understand that it can be manufactured but not economically.

*Mr. Muir.*—As a matter of fact we have got at the present moment one certain class of bamboo at our mill: we cannot manufacture from that so economically, but we are still experimenting.

*President.*—Are these brought from your reserves?

*Mr. Muir.*—We are experimenting with the local ones.

*Mr. Ginwala.*—How far are you prepared to accept this as correctly representing the position, this quotation from Mr. Raitt's paper? It is unfortunate that I have not been able to get a copy of that paper and of the other book that Mr. Raitt has written.

*Mr. Muir.*—I am not sure that we have got one.

*Mr. Ginwala.*—Besides Mr. Raitt, is there any other authority on that point?

*Mr. Muir.*—I do not think beyond the Forest authorities there can be any one who has made a comprehensive study of the question.

*Mr. Ginwala.*—Of course every Provincial Government interested in pulp has consulted Mr. Raitt and Mr. Pearson. Did you supply us with a map of the locality? Have you got one?

*Mr. Muir.*—I am afraid we have not got one of the Reserve. You will see where it is on the marked map of Bengal we have already sent.

*President.*—What distance is the reserve from Chittagong?

*Mr. Muir.*—It is 112 miles.

(A note on the reserve was handed over to the President.)\*

*Mr. Ginwala.*—Please see the distance noted in answer to Question 18.

*Mr. Muir.*—That was prepared in office in answer to Question 18—the distance covered by rafting—119 miles. It is a natural criticism that you have made. We have got Mainimukh as our headquarters up there and we raft our materials to Jaitpura which is 14 miles above Chittagong. The reason for that is that we had a small site at Chittagong for handling it alongside the railway but we found that the expense on the rent more than counter-balanced the cost of the extra boating to the railway.

*Mr. Ginwala.*—This boating and steamer, is it on the other side or this side?—134 miles.

*Mr. Muir.*—This 134 miles includes only 14 miles on the other side of Chittagong and then it is carried from there by rail and steamer.

*Mr. Ginwala.*—Then there must be transshipment?

*Mr. Muir.*—Yes. We have considered every sort of transport. The inland steamer companies can only come round to Chittagong about two months in the year. Transport by big steamer is considerably more expensive.

*Mr. Ginwala.*—From Chittagong to Calcutta?

*Mr. Muir.*—Then boating it up to the mill.

*Mr. Ginwala.*—Is the crushing plant you have got an expensive one?

*Mr. Muir.*—Not very.

*Mr. Ginwala.*—At what stage does it reach there, and why do you crush?

*Mr. Muir.*—This is purely for convenience of transport.

*Mr. Ginwala.*—Is it a process which you would have to perform at your mill?

*Mr. Muir.*—No. It is an extra process.

*Mr. Ginwala.*—What does that process cost?

*Mr. Muir.*—It costs Rs. 9 a ton for crushing and despatching: that is importing it, crushing and baling it and then re-exporting it.

*Mr. Ginwala.*—That you would save entirely if you had your mill there?

*Mr. Muir.*—Yes. You are asking the total cost of the plant at Jaitpura: it is Rs. 40,000.

*Mr. Ginwala.*—I think it is not such a favourable lease as you would like to have?

*Mr. Muir.*—Not as favourable as we should like to have.

*Mr. Ginwala.*—This royalty is fairly high.

*Mr. Muir.*—This is the same as I have here in two other leases. These are Burmese leases. They had 7 years free first and then their Royalty was on the dry manufactured pulp and ours is on the raw bamboo, that is to say, about 2½ times as much.

*Mr. Ginwala.*—The minimum royalty looks rather high.

*Mr. Muir.*—We think the Government of Bengal might have done the same as the Government of Burma did and given us 7 years free.

*Mr. Ginwala.*—That would have saved you Rs. 70,000?

*Mr. Muir.*—Yes.

*Mr. Ginnala.*—This figure increases to Rs. 2 per ton?

*Mr. Muir.*—It does.

*Mr. Ginnala.*—Does the Government of Burma do the same?

*Mr. Muir.*—It is a much less favourable lease than the Government of Burma lease, and we should be very grateful if you could use your influence with the Government of Bengal to modify the lease!

*Mr. Ginnala.*—As far as the Government of Burma is concerned the Government of India can do nothing. "Forests" are a transferred subject!

You say the provision about allowing other people to cut bamboo does not affect you at all.

*Mr. Muir.*—We have nothing to say against that.

*Mr. Ginnala.*—Is there a large population round about this tract?

*Mr. Muir.*—There is sufficient population, but it has been difficult so far to get them to take kindly to the new work.

*Mr. Ginnala.*—I am not talking about labour. What I mean is whether this bamboo that Government has reserved for them would be sufficient for the domestic needs of the population, because in Burma that is the difficulty very often. So far as you are concerned you think this is sufficient?

*Mr. Muir.*—We believe so.

*Mr. Ginnala.*—Coming now to answer 34 (b) we have been told to-day that, whatever the production of bamboo pulp in the country, a certain amount of sulphite wood pulp will have to be imported. Do you agree?

*Mr. Muir.*—No. It is not correct.

*Mr. Ginnala.*—You do not agree with that opinion?

*Mr. Muir.*—No.

*Mr. Ginnala.*—Now, with regard to mechanical pulp: is there any chance of bamboo being converted into pulp mechanically?

*Mr. Muir.*—I think it may be possible but I don't think it is likely to be done within a number of years. This is the first stage of development of the bamboo paper pulp industry, and I think the other is not likely to follow for quite a period of years.

*Mr. Ginnala.*—That would make a considerable difference to the industry as a whole; there is a good deal of demand for mechanical pulp.

*Mr. Muir.*—That is my opinion, but I think it will be possible eventually though I don't think it is probable in the near future. Our attention will be devoted to the manufacture of paper by the sulphite process, and then the mechanical process will very likely follow later.

*Mr. Ginnala.*—Has it been investigated at all?

*Mr. Muir.*—Not by us.

*President.*—It is too early to come into your calculations at this stage?

*Mr. Muir.*—I should think so.

*Mr. Ginnala.*—What is the concession rate that you are talking about?

*Mr. Muir.*—It is impossible to say exactly what is the concession we do get on the transport of bamboos, because a special rate had to be made. But we get a relatively cheaper rate than I believe on the bamboo transported from Silchar district. At the same time it seems to us possible that, all things considered, the rates might have been made decidedly lower.

*Mr. Ginnala.*—What is the distance?

*Mr. Muir.*—

From the Reserves to Naihati . . . . .	470 miles.
From the Reserve to Jaitpura . . . . .	119 miles.
and another 14 miles from Jaitpura to Chittagong . . . . .	14 miles.

*Mr. Ginnala.*—What about the rates?



*Mr. Muir.*—

Concession rate on the Assam-Bengal Railway, 112 miles, Rs. 1-8 a maund.

Steamer, 120 miles, Rs. 1-9 a maund.

Eastern Bengal Railway, 104 miles, Rs. 1-7 a maund.

*Mr. Ginnala.*—By boat you will pay more?

*Mr. Muir.*—Yes.

*President.*—These railway rates, how do they compare with the ordinary freight?

*Mr. Muir.*—The only concession that was given is that they give us cheaper freight rates than they previously quoted, but I don't think they are cheap rates.

*Mr. Kale.*—Are there different species of bamboo in your reserve?

*Mr. Muir.*—Yes, I think there are five species.

*Mr. Kale.*—Have you got any preference for any particular species?

*Mr. Muir.*—*Mooli* bamboo is the most preferable, but they are all quite suitable for the manufacture of paper.

*Mr. Kale.*—What area does the one which you prefer cover?

*Mr. Muir.*—Let me give you particulars of extraction. In 1917-18 33 lakhs of *mooli* bamboos were taken out of a total of 50 lakhs, and if that can be taken as the criterion it would be about 3/5th of the area.

*Mr. Kale.*—Can you tell us what is the peculiarity of the good quality bamboo?

*Mr. Muir.*—If you had an expert here with a microscope he could probably talk to you for a long time, but as one who is not an expert, as far as I can tell you, the best bamboos to manufacture into pulp at present, according to our present knowledge, are the ones not too solid, specially at the bottom stem.

*Mr. Kale.*—Does dryness and wetness in the bamboo make any difference?

*Mr. Muir.*—Yes, but only as regards the actual yield; if you have 50 per cent. of moisture in the bamboo you will get a proportionately smaller yield.

*Mr. Kale.*—The drier the bamboo the better?

*Mr. Muir.*—Yes.

*Mr. Kale.*—So that you can stock it for a long time and it won't deteriorate?

*Mr. Muir.*—Yes, provided the white ants do not eat it!

### III. LABOUR.

*President.*—In answer to Question 40 you say "For reasons already explained in reply No. 20 we are unable to give details of wages." The information you are now giving us in that statement—

*Mr. Muir.*—It won't give you details of wages paid to labour because we do not keep that. You will understand that in works of that sort it is impossible to keep that; the men may go away and then may not return again for a week and so on.

*President.*—Are they paid by piece rates?

*Mr. Muir.*—Entirely by piece rates.

*President.*—You tell us in answer to Question 41 that you provide labour for the local population, who live largely by jhuming, at times of the year when they have no agricultural duties to attend to. Which times of the year are these? Is it in the rains that you do most of the work or when?

*Mr. Muir.*—We do most of our extraction in the rains and the cold weather.

*President.*—What is the best time for bringing this stuff down the river?

*Mr. Muir.*—We can bring it down practically at all times of the year, but it is not so good in the hot weather. It is good to bring down the smaller freshets during the rains. We would like to get most of it down before the middle of the hot weather.

*President.*—It is interesting that you have only 4 Europeans, and that you believe you can run even a larger establishment with only four Europeans. One quite recognizes, specially at the time when you are introducing a new process, that expert supervision is absolutely everything at the start. I think it is satisfactory that you have been able to carry on with so few.

*Mr. Muir.*—We are carrying on, and we hope that ultimately Indian labour will replace some of it, but we have not been able to do what we would like to do in the way of training, because before the place can make the people, you have got to make the place.

*President.*—You have got to get yourselves firmly established before you think about experiments of any kind.

*Mr. Muir.*—Yes.

*President.*—In answer to Question 51 you say "If educated Indians were seriously to take up paper manufacture, we believe results would be most satisfactory." What exactly is in your mind there?

*Mr. Muir.*—As far as our experience goes, beyond our Chemist we have had no proof of any inclination on the part of better educated Indians to take up the paper trade, and I understand that the number of those who have taken to it seriously and stuck to it is very few.

*President.*—What you mean is that in your opinion Indians who go into it do not persevere in it?

*Mr. Muir.*—There is a disinclination amongst the better educated Indians to take it up.

*President.*—There is just this to be said that the Upper India Couper Mills are entirely run by Indians.

*Mr. Muir.* That is true. Amongst our superiors we have got Indians; our policy is to mix Indians and Europeans in our entire staff. We promote them all.

*President.*—We put the same question to Mr. Carr, and I think our feeling was that perhaps there has been a lack of perseverance on the side of the manufacturer also, so far as we could judge. Is there anything in the nature of paper manufacture which is unsuitable for Indians?

*Mr. Muir.*—No.

*Mr. Kale.*—In answer to Question 41 you say "We have had the usual labour difficulties in accustoming semi-civilized labour to a new industry." What is semi-civilized labour?

*Mr. Muir.*—They are the Chakmas.

*Mr. Kale.*—The work that you put them to is cutting bamboos, so that has nothing to do with your industry?

*Mr. Muir.*—Nothing at all.

*Mr. Kale.*—Then why should there be trouble?

*Mr. Muir.*—I understand that there is a certain sort of man who objects to any sort of controlled labour. From what I can gather they are on the lines as the hill tribes of Assam.

*Mr. Kale.*—They do not like to work continuously?

*Mr. Muir.*—Or under restraint.

*Mr. Kale.*—Then there is no technical difficulty?

*Mr. Muir.*—That is the simplest thing in the world.

*Mr. Kale.*—The President was just asking you whether there was any difficulty in the manufacture of paper which Indians are not able to overcome, and you said there were none. Then what do you mean by saying "If educated Indians were seriously to take up paper manufacture, we believe results would be most satisfactory"?

*Mr. Muir.*—Our Chemist is an Indian at the present time. We referred to the study of paper manufacture which is, I think, generally admitted to be a very specialized subject.

*Mr. Kale.*—So far as I know some Indians have gone abroad for studying this industry, but I don't think that helps them unless they know Indian conditions first.

*Mr. Muir.*—As the President was saying, the Upper India Couper Mills have manufactured paper successfully entirely with Indians, but we have not come across any Indians who showed any desire to take it up.

*Mr. Ginwala.*—The Lucknow mills brought up a man from the ranks who is now Manager.

*Mr. Muir.*—We hope to do so in the future.

*Mr. Kale.*—I have not still been able to understand what was in your mind when you said "If educated Indians were to take seriously to paper manufacture." If they are not doing it to-day it is because there is no capital coming forward. That is one thing. Another thing may be that they have not got the technical knowledge which is required for paper manufacture.

*Mr. Muir.*—They have got to take the subject up very seriously and start from the beginning. They have got to take up the technical side and study the theoretical part of it as well as the practical application of it.

*Mr. Kale.*—In answer to Question 50 you say "Labour is mostly settled in the locality of the mill though originally drawn from various parts of India." That is to say, they have come from outside the Province and now they have settled there.

*Mr. Muir.*—Yes.

*Mr. Kale.*—Is it from the United Provinces?

*Mr. Muir.*—Mostly Beharis and Uryas but also from the United Provinces.

*Mr. Kale.*—What applies to most of the industries in Bengal is common to you also?

*Mr. Muir.*—Yes.

## Continued on Saturday July 5th.

### II. (B) AUXILIARY RAW MATERIALS.

*President.*—With reference to your answer to Question 37 (b): the question is "what quantity of each of the chief auxiliary raw materials is required per ton of finished paper" and you say "This can only be given confidentially." I quite understand as it would, so to speak, indicate the process.

*Mr. Muir.*—That is it.

*President.*—If you can give it confidentially that is all we require in this matter. I don't think that it is likely that we would wish to publish the actual figures.

*Mr. Ginwala.*—Does that objection apply only to the first two items?

*Mr. Muir.*—As regards sulphur and magnesite I would prefer to ask you to keep the figures confidentially.

*Mr. Ginwala.*—The other items are well-known.

*Mr. Muir.*—Yes.

*President.*—If you could give us the output, we could get on.

*Mr. Muir.*—We have given you our present output.

*President.*—The only output figures that we have got are for two years ending March 1923 and March 1924. I don't know which it is, or whether it is something between the two.

*Mr. Muir.*—The latter represents our present output! Before that, we have not been working up to the capacity that we should work up to.

*President.*—Which am I to take? We will leave out the figures for sulphur and magnesite. What we want is the outturn of paper for which these quantities of materials are required.

*Mr. Muir.*—2,435 tons.

*President.*—That is for the year ending March 1924?

*Mr. Muir.*—Yes. The figures previous to that are not of value.

*President.*—In any case we don't want to enquire about the duty on sulphur, because in that matter we have already done you a good turn without knowing it. Do you purchase magnesite in India?

*Mr. Muir.*—It comes from near Madras.

*President.*—Of the other things you have mentioned, a good many come under machinery and you pay only 2½ per cent. duty?

*Mr. Muir.*—All except stores.

*President.*—Apparently the bleaching powder, China clay and dyes come from abroad.

*Mr. Muir.*—Yes.

*President.*—What about wires? Are they classed as machinery?

*Mr. Muir.*—Yes.

*President.*—Dyes, of course, are very expensive compared with other things but the total quantity is not very large.

*Mr. Muir.*—No. It is only for coloured papers and tinting white papers.

*President.*—Apparently bleaching powder and China clay are the most important things which you have to import.

*Mr. Muir.*—We have said ultimately that, if our plant expands in the way we hope it will, we would put in a bleaching plant. It is not at all economical to import bleaching powder.

*President.*—So that if you make bleaching powder the materials exist in India?

*Mr. Muir.*—I think that the Titaghur people do make their own.

*President.*—Do you purchase your rosin in India?

*Mr. Muir.*—Yes.

*President.*—Eventually, once you start manufacturing your bleaching powder, I take it that the Customs duty on materials and so on will affect you mainly in respect of machinery and stores, just as it would affect any other manufacturing firm.

*Mr. Muir.*—It may be some time before we can manufacture bleaching powder even under favourable conditions. Till then, the duty on that is a burden. There is no factory making it in India, and there is considerable deterioration that it seems impossible to avoid.

*President.*—That was what we were told by Mr. Carr on that subject. But, of course, there is this to be said as regards bleaching powder that it would raise the big question. We can hardly exempt one set of manufacturers without exempting others, and that would bring in the whole cotton trade.

*Mr. Muir.*—I quite realise it.

*President.*—It is rather a big question.

*Mr. Muir.*—I can give you the pounds per ton of these various materials which we use. As you don't particularly want it yourselves, I would ask you to exclude sulphur and magnesite. I don't think that they are of material importance to you. We use 273 lbs. of bleaching powder, 56 lbs. of rosin, 292 lbs. of clay and 140 lbs. of alum.

*President.*—What is alum for? Is it for clearing water?

*Mr. Muir.*—Yes.

*Mr. Ginwala.*—It helps the sizing?

*Mr. Muir.*—It is for clearing water and for helping the sizing.

*President.*—When you start making your own bleach, would you make powder or stop at the liquor?

*Mr. Muir.*—At the liquor.

*President.*—That is what Mr. Carr told us.

*Mr. Ginwala.*—You don't require any recovery plant?

*Mr. Muir.*—No. It is the other process that requires it.

*Mr. Ginwala.*—And there is no question of recovering bleach in your case?

*Mr. Muir.*—No.

*President.*—You allude at the end of this section to the possibility that wires might eventually be made in India, if the demand for them were sufficiently large. It is doubtful whether that would result in any economy to you. Apparently when anyone started making wires, he would claim protection, so that it might not be a source of economy at all.

*Mr. Muir.*—It is likely to be a very long way in the future before there would be a large enough market for wires to bother about.

*President.*—They are both things used exclusively in paper mills.

*Mr. Muir.*—I don't know whether any existing firm can adapt their machinery to the manufacture of these.

*President.*—What I meant was that, where a particular apparatus is only used in one industry and that industry has only half a dozen factories in the country, probably there is not a big enough market for the domestic manufacturer?

*Mr. Muir.*—That is what I mean. I don't think that anybody would be likely to bother about it even under most favourable circumstances.

*President.*—Belting, of course, is being manufactured in India.

*Mr. Muir.*—Yes. Some of it has to be acid proof and that we import. The rest we buy indiscriminately in this country and from Home.

*Mr. Kala.*—In answer to Question 38, you have given the Customs duties. Now take the Customs duty on bleaching powder. You have given it as Rs. 37-8-0 on a ton of bleaching powder, the price of which you have given as £10-1-3. How does it work out? Are we to understand that the duty on one ton of bleaching powder is Rs. 37-8-0?

*Mr. Muir.*—If you take it in pounds (sterling), there is the price of £10, there is the sum for freight of £3 and there is a small sum for landing and transport charges. I think that you will find that the Customs duty works out roughly at Rs. 37-8-0.

*Mr. Ginwala.*—There I think that the Tariff Valuation comes in.

*Mr. Muir.*—Yes, Rs. 37-8 equals 15 per cent. on the Tariff Valuation of Rs. 12-8 per cwt.

#### IX. COST OF PRODUCTION.

*President.*—You have marked all the information under this head "confidential," but I do not know how far its publication would prejudice, except in so far as the figures show that the present costs are somewhat higher.

*Mr. Muir.*—As regards that, I am prepared very largely to accept your recommendations. You know much better than I do what figures you consider essential to publish, and we will do our best to meet your wishes and allow them to be published.

*President.*—To begin with take the overhead charges. I don't think that there can be any objection to their publication. Take working capital. Once the figure is known, anybody who knows the output could find out what your interest charges must be. What is important to us is not the

particular amount that you have to pay as interest in any particular year, but the average charge on that account.

*Mr. Muir.*—We have only got one typical year which we have been able to give you.

*President.*—As regards depreciation I take it that what you have to consider is what it would cost you to replace the plant and machinery when they become obsolete or worn out. Is not that the important element in fixing the amount of depreciation required?

*Mr. Muir.*—For that we are always in the present circumstances prepared to accept Government's valuation.

*President.*—You are thinking of the rates of depreciation?

*Mr. Muir.*—Yes.

*President.*—Supposing you have got plant and machinery of which the actual cost is Rs. 30 lakhs purchased at about the time when you purchased. Now if the prices dropped heavily and the machinery could be replaced for, say, Rs. 24 lakhs, what should be allowed for depreciation? Should the depreciation rates be applied to the original cost or the replacement cost?

*Mr. Muir.*—The original cost should be taken.

*President.*—Let me put it the other way. Supposing the prices had risen, and you had paid Rs. 30 lakhs, but could not replace it for less than Rs. 40 lakhs, would you not have to depreciate on the higher figure, because, if you did not, you could not replace your assets when they disappeared?

*Mr. Muir.*—I should still feel inclined to say that, strictly speaking, the original figure was the correct one to take. What a careful manufacturer would like to do is to take the higher figure and allow depreciation on that. But I should think that if you had to stick to one, you ought to take the original cost.

*President.*—Our point of view is not quite the same. Supposing we are endeavouring to calculate what price will give the Indian manufacturer a reasonable profit, we have got to include as part of his cost, the depreciation on his buildings, plant and machinery. Would not the proper figure for us to take the present day cost as nearly as we can determine it?

*Mr. Muir.*—It would be if you are considering the future. But if you are considering the past?

*President.*—Must we not consider only the future?

*Mr. Muir.*—You would take in conjunction the present and the past. Take our particular case. We have spent perhaps more money than we should do for putting up a plant because we have had all the experimenting to do.

*President.*—We did not do that in the case of the Tata Iron and Steel Company. As far as we could, we ascertained what would be the present-day cost. I admit that it is exceedingly difficult to ascertain it.

*Mr. Muir.*—We have not made an attempt to ascertain it.

*President.*—I will put it to you this way. If you had a depreciation fund, must you not set aside, by the time your machinery is worn out or becomes obsolete, a sufficient sum to replace it by new plant of the same capacity?

*Mr. Muir.*—Yes.

*President.*—You are now as you were when you started. You have not lost anything.

*Mr. Muir.*—On the other hand take this. Suppose I put up a paper mill and run it to death. In addition to dividend it should give the shareholders their money back. I might want to build another one in another place at the end of that period when the machinery and buildings were completely worn out. What you put aside as depreciation should enable you to get back your capital.

*President.*—That element comes into it—possible repayment of capital—but so long as they are assets with the same earning power I think you must take it on that basis.

*Mr. Ginwala.*—Why should the shareholders get the capital: you can tell the shareholders "We built the mill for you for Rs. 25 lakhs: if you build it now you can build it for Rs. 15 lakhs. Take it. Why should you get Rs. 25 lakhs?" After all, the shareholders are only entitled to property, which will give them the same return.

*President.*—But so long as the property has the same earning power as originally, apart from any change in investment?

*Mr. Muir.*—Of course the value of the property rises and falls. A property which it takes Rs. 40 lakhs to put up is worth Rs. 40 lakhs when it is erected. If the market price of machinery and so on falls to half, the mill would be worth Rs. 20 lakhs and not as much as it was worth when it was put up.

*President.*—The value of the machinery to the company is determined not by what it would sell at, but by what it can earn.

*Mr. Muir.*—A factory works in competition with other factories and theoretically, when the cost of the mill is, say, Rs. 40 lakhs, the earning power of the machinery is greater than when the price of erecting a similar mill falls to Rs. 20 lakhs, other things being equal.

*Mr. Ginwala.*—There is some confusion of thought there. Supposing you take the depreciation on the replacement value which is varying. If you put down less for depreciation you increase your profits which are divisible as dividend, i.e., what the shareholders would get normally. The shareholders do not stand to lose by taking your depreciation value on a smaller scale.

*Mr. Muir.*—Take a typical industrial concern. Suppose you take a fair return on it at 10 per cent. Normally the concern will earn 10 per cent. plus depreciation on its plant. Therefore, as the replacement value of that plant goes up and down, the earning power of that factory will also go up and down.

*President.*—Take the case of the jute mills. I do not think that the profits they earn go up and down with the cost of machinery. Moreover, I do not think it is any part of the duty of the Tariff Board in fixing its scheme of protection to endeavour to protect the whole capital of the existing companies.

*Mr. Muir.*—Supposing you are willing to recommend protection do you give any consideration to pioneers?

*President.*—Certainly not to individual firms.

*Mr. Ginwala.*—We make this allowance. Suppose in the initial stages the cost of production is high, it will go down as the output or the practice improves. The difficulty is this: that in many industries in the past—I mean during the business boom—they bought the machinery at much higher prices than now. The question arises whether we should take that into account or not. In the steel industry we took the present value of the plant and machinery to a man who started the industry now, and we calculated what that man ought to get on the capitalisation.

*Mr. Muir.*—That constitutes more or less a ruling on the point.

*President.*—If we departed from the procedure we ourselves adopted in the original case, we should have to give strong reasons.

*Mr. Ginwala.*—Your case happens to be a little bit different, but there are many concerns which are not doing well on account of over-capitalisation on the plant and machinery: there might be under-capitalisation in other ways. For that reason we must follow some rule which would conduce to general convenience. In the steel industry we adopted the rule we referred to just now.

*Mr. Muir.*—We have given you details regarding exchange on our remittances. Some were very favourable—2s. 4d. on our first two remittances.

*President.*—I have worked out the average rate of exchange: it came to 1s. 8½d. on all remittances together.

*Mr. Muir.*—Yes.

*President.*—After all, what we are trying to get at is this. Is anybody the better or the worse off for knowing your actual figures for depreciation and working capital. As I said, in the case of the working capital, it can be very easily worked out.

*Mr. Muir.*—As regards the working capital or depreciation, if you think it would be advisable for us to publish these, we will not object.

*President.*—It always prejudices the case for an industry, if there is anything not published when there is no obvious reason for not publishing it.

*Mr. Muir.*—You may publish the whole, if you think it desirable. You have much more experience of these things.

*President.*—We do recognise there may be difficulties about particular figures. What it really comes to is the works costs and that is for practical purposes what you have entered in these forms.

*Mr. Muir.*—II and III are of course to some extent theoretical.

*Mr. Ginnala.*—Do you follow any particular principles in allocations in your cost account?

*Mr. Muir.*—I have here a copy of the cost sheets we made for you, but beyond that we have the operating costs: boilers, engineering shed, plant, chemical crushers, and so on divided crosswise into the usual heads, salaries, etc.

*Mr. Ginnala.*—I take it that the last form is the most correct?

*Mr. Muir.*—Yes.

*Mr. Ginnala.*—There is no conjecture there.

*Mr. Muir.*—No.

*President.*—What is your feeling about these forms?

*Mr. Muir.*—If you think it will help our cause, and if you do not think yourself there is any great harm in publishing them, you can do so.

*President.*—It certainly improves your case.

*Mr. Muir.*—Then let it go in.

*President.*—As regards these costs there is one small point in form IV. This last item "freight" at the end, what exactly is that?

*Mr. Muir.*—Freight to the various markets, that we have to pay.

*President.*—How do you calculate that? Do you take the average of the freights you actually had to pay?

*Mr. Muir.*—This is the actual freight we had to pay divided by the tonnage.

*President.*—It might vary a good deal from year to year.

*Mr. Muir.*—It might, but presumably one would get the reflection of that in the price received.

*President.*—That apparently is on the basis that the price of paper is practically uniform.

*Mr. Muir.*—In practice the further in distance we are from our market the worse is the net price.

*President.*—That is what Mr. Carr also was telling us. It is not so, of course, in the case of very bulky things like steel or cement, where the price goes up with the amount of railway freight.

*Mr. Muir.*—I do not think it goes up to the full extent, but directly you get beyond a certain place in India, I think the papers that come in from the other side of India start competing.

*President.*—Take Delhi which is equidistant from the sea ports roughly. One does not quite see why Delhi consumers should get their paper as cheap as Calcutta or Bombay people. Is there any special reason for this in the paper trade? Being a consumer myself I was always led to believe that the consumer always paid; in this case, apparently, he does not.



*Mr. Muir.*—I think it has always been the case that the up-country markets have been relatively less profitable than the local ones. It probably is that it is ease of distribution at the near at hand markets avoids the necessity for the dealers carrying stocks and possibly helps prices. In the same way in some cases the necessity of carrying larger stocks of Home papers prejudices their prices a little.

*President.*—So to speak, in the Calcutta market the paper makers are carrying their own stock, whereas up-country somebody else has got to carry stock for them. That may be the reason?

*Mr. Muir.*—Yes.

*President.*—How much of your paper during last year actually went to Calcutta and how much went up-country, do you happen to know roughly?

*Mr. Muir.*—I could only tell it to you by working back roughly the freight figures, but I may say that Calcutta is our best market.

*President.*—The main point I wanted to put to you is really a general question which occurred to me both in the overhead charges and the works costs. I was trying to work out very roughly how much the overhead would come to per ton, starting on the basis of a works cost of Rs. 485. In the case of depreciation I think I took it on the full paper making capacity, 3,000 tons roughly, and I took the depreciated value of your machinery and buildings, the reason being not any theoretical reason but simply this, that the present-day cost of your plant and machinery with the same output must be lower than what you actually paid, and the depreciation actually written off makes an approximate allowance for it—it may not be the right allowance but it will serve. On that basis I arrived at a figure of Rs. 75 a ton for depreciation.

*Mr. Muir.*—I have got the depreciation worked out here in answer to Question 117 and it is Rs. 74-6-1 with the figures worked out on the actual output. The figure you have taken is a very optimistic one. It would hardly be our maximum capacity per machine even if we had the two machines.

*President.*—On the other hand it is probable that the present-day cost of plant and buildings is rather high and one thing will set off against the other. The working capital I took at Rs. 10 lakhs and I took the interest at 7½; on the output of 3,000 tons it comes to Rs. 25 a ton of paper.

*Mr. Muir.*—Yes.

*President.*—I took the head office expenses which is not a very important item at Rs. 45,000 and this divided by 3,000 tons would come to Rs. 15 a ton. Then on the manufacturer's profit which has got to be added your figure for buildings and machinery comes to nearly Rs. 35 lakhs. If the capital were taken at Rs. 30 lakhs it comes to 1,000 per ton of output and 10 per cent. of that which is the amount required for the manufacturer's profit is Rs. 100 per ton of output. That is how you stand; so that the average price you require is about Rs. 700 a ton. What I really want to get at is to what extent you can already foresee that you can bring down the costs.

*Mr. Muir.*—Do you mean by increasing the plant?

*President.*—Yes.

*Mr. Muir.*—I took some figures on the original cost of the plant and our actual expenditure and I worked out that we could probably go down Rs. 100 a ton.

*President.*—On the present plant?

*Mr. Muir.*—I took the depreciation based on the present plant and a rough estimate for doubling its capacity.

*President.*—Supposing protection were given and you thought it worth while to go ahead, you would aim at about 6,000 tons output?

*Mr. Muir.*—I would put down at 5,700 tons.

*President.*—I want to take a round figure.

*Mr. Muir*.—You may as well take it at 5,500.

*Mr. Ginwala*.—I have asked the other manufacturers to work out precisely the same thing on the basis of 5,000 tons.

*President*.—That is on two machines. Take the overhead first. What additional capital do you roughly estimate would have to be raised?

*Mr. Muir*.—As I told you, anything which we could give you without reference to the machinery makers would necessarily be a complete guess, but I would put it at Rs. 10 lakhs.

*President*.—On Rs. 10 lakhs you would practically double your plant? Are you in a position to say what the present-day cost of the existing plant would be?

*Mr. Muir*.—That necessitates a reference Home.

*President*.—Even if we get it later that would be useful. I hope you will be able to get it within three months. We will provisionally take at the moment Rs. 30 lakhs as the present-day cost of the existing plant, machinery and buildings.

*Mr. Muir*.—You have taken a very considerable depreciation; don't you think you have taken rather a lot? We have given the depreciated plant as it stands in our books.

*President*.—You have given us the amount of depreciation. Rs. 30 lakhs may be taken as a rough and ready figure, I think?

*Mr. Muir*.—I thought you were working on the same figure. After depreciation our plant stands at Rs. 42 lakhs.

*President*.—That is the whole block. It may be my Rs. 30 lakhs is too low, I do not know. On the other hand we must take something.

*Mr. Muir*.—I will not say 'yes' or 'no,' but you have taken an enormous depreciation. You have taken the exchange depreciation, which comes to nearly 20 per cent. and you have further taken much more than the statutory depreciation.

*President*.—You are using the phrase "depreciation" in quite a different sense. I am taking the present-day cost of your plant and machinery at a low figure because I am trying to take an optimistic view of the prospects of the industry. The higher you put up the initial cost of the plant and machinery, the more gloomy you make the prospect of the industry.

*Mr. Muir*.—On the other hand one could urge the other extreme without in any way reflecting as the Forest officers have done. According to the Forest officers' figures, on the other hand, the industry is not in need of protection at all, and I think it would be best to base our figures on any actual ones available.

*President*.—In the last section of your representation the view taken is distinctly optimistic.

*Mr. Muir*.—Supposing that we got protection to the extent we have asked for and allowing that prices in India reflected that rise absolutely, and supposing our figures are correct for the increased plant, we should be able to make a reasonable profit.

*President*.—What figure am I to assume for the capital cost of the enlarged factory?

*Mr. Muir*.—Would you think 50 lakhs too high?

*President*.—It seems to me that on the basis of 50 lakhs you hardly stand a chance if you are to succeed at all. Personally I do not see how it is going to be done.

*Mr. Ginwala*.—Do you depreciate your patent rights?

*Mr. Muir*.—No.

*President*.—Surely they have got a certain fixed term. The patent is not like a perpetual mine. You can almost take it as similar to goodwill.

*Mr. Ginwala*.—Hardly, because goodwill is generally a permanent thing and the patent is not.

*President.*—Goodwill is sometimes evanescent.

*Mr. Ginwala.*—Would it not be a better way to arrive at the result by taking the life of the patent at so many years? Really speaking it ought to go to your cost of production.

*Mr. Muir.* I am not very well versed in these things. Is it not liable to be renewed in the usual way?

*Mr. Ginwala.*—After a certain number of years the patent is useless. You are really paying for the process in the meanwhile.

*Mr. Muir.*—Depreciating the item of goodwill to extinction in 15 years, our process is going to cost us Rs. 10 per ton on our present plant, or Rs. 5 a ton if the plant be doubled.

*President.*—I want to get on with the general discussion. If you think Rs. 50 lakhs is a reasonable figure to take, let us take it by all means.

*Mr. Muir.*—I don't think it is unroasonable.

*President.*—Let us take 50 lakhs, and you are going to turn out 5,500 tons. It is going to be very nearly Rs. 100 a ton to pay 10 per cent. on the capital.

*Mr. Ginwala.* In our calculation it would average 8 per cent. if we take debentures into account.

*President.*—We took 8 per cent. in the case of the steel companies. If you get 8 per cent. you would not be badly off. That would be 4 lakhs a year that you have got to make for manufacturer's profit.

*Mr. Muir.*—You are allowing depreciation at what per cent.?

*President.*—I have taken your total fixed capital expenditure as 50 lakhs and am assuming that 8 per cent. is going to be paid on that; that means 4 lakhs a year and your outturn is 5,500 tons. That comes to about Rs. 73 a ton.

*Mr. Muir.*—Yes.

*President.*—What would be the working capital required for an output of 5,500 tons?

*Mr. Muir.*—Twice Rs. 10 lakhs will cover that, I think.

*President.*—Is not that very high?

*Mr. Muir.*—I think if you take a figure of 17 lakhs it won't be unreasonable.

*President.*—It is for you to answer that. I thought your 10 lakhs was high as far as I could judge by comparing it with figures given by other companies.

*Mr. Muir.*—That is how it is arrived at; it is roughly 10 times the monthly working cost.

*President.*—That is 10 months' output?

*Mr. Muir.*—Yes.

*President.*—The other companies took 7 months' output, I think.

*Mr. Muir.*—Let us take 14 lakhs for the increased output. That would be about 7 months' output.

*President.*—All right. Let us take 8 per cent. again to get the same rate of interest.

*Mr. Ginwala.*—But you don't pay 8 per cent. always; you pay only the bank rate.

*Mr. Muir.*—That is right.

*Mr. Ginwala.*—However, you can take 8 per cent. for the present.

*President.*—That would be 1,12,000.

*Mr. Muir.*—Yes.

*President.*—And divided by 5,500 it is almost exactly 20 rupees a ton. On the depreciation you have got 6½ per cent. all round on 50 lakhs, which is 1/16th about 3 lakhs.

*Mr. Muir.*—Rs. 3,10,000 is the approximate figure that I have made.

*Mr. Ginwala.*—It is Rs. 3,12,000.

*President.*—It will come to 55·82; and then Head office expenses and agents' commission Rs. 19; that is 5,580 or Rs. 167 above works cost.

*Mr. Muir.*—Yes.

*President.*—Now, you have got to show to what extent you think the works cost is likely to go down with the increased output.

*Mr. Muir.*—At present our hope is, leaving aside the question of raw material, that we shall be able to bring down our production cost to Rs. 421 a ton. Rs. 421 plus Rs. 167=Rs. 588 a ton.

*President.*—Let us say Rs. 600 leaving a margin; that would be better.

*Mr. Muir.*—That would be prudent and at our last selling price for paper. Supposing the duty were increased, an increase of 8·7 per cent. which is the increase from 15 per cent. to 25 per cent., we get a figure of Rs. 619·36 a ton.

*Mr. Ginwala.*—This is really more or less the basis on which you worked out your future estimates with which we are concerned.

*Mr. Muir.*—These are the figures that I brought with me here.

*Mr. Ginwala.*—Will you give me any reply to the question I put to you at the beginning?

*Mr. Muir.*—I have worked out no figures that do not apply to ourselves personally.

*Mr. Ginwala.*—Have you been through Mr. Raitt's book?

*Mr. Muir.*—I have been through it cursorily last night.

*Mr. Ginwala.*—You see he takes bamboo at Rs. 32·8 on a 10,000 ton basis and Rs. 30 a ton on a 5,000 ton basis.

*Mr. Muir.*—That is the actual quantity of bamboo required to produce a ton of paper, and our actual figures worked out to Rs. 100. Of course he is not paying the freight and baling charges on his bamboos which we are doing.

*Mr. Ginwala.*—The point is: can you get down to that figure if you were manufacturing your pulp there?

*Mr. Muir.*—No.

*Mr. Ginwala.*—Is that a figure which anybody could act on?

*Mr. Muir.*—I do not know anything about Cnttack which he is talking about. We cannot work down to these figures at Chittagong.

*President.*—Which of Mr. Raitt's figures are most contrary to your firm's experience?

*Mr. Muir.*—I am not in a position to say anything about his cost figures, as he has gone entirely on the soda process.

*Mr. Ginwala.*—The most important thing is the question of raw materials. With regard to the other things you may not get the same result as a most up-to-date factory on a very large scale would. The most important thing is bamboo, and that is why you think these calculations are not to be relied on?

*Mr. Muir.*—If we were putting up a mill in Silchar or at Chittagong we would not approach those figures for the cost of the raw material.

*Mr. Ginwala.*—Because if you could work up to these figures you would undersell the whole world practically, would you not? Then, you see he takes 1½ tons of coal for the pulp. Do you expect to get down to that figure? You have given 4·25 tons as your figure for one ton of paper.

*Mr. Muir.*—That is for the finished paper. We estimate the consumption of coal required per ton of unbleached pulp at 2·128 tons. For bleached pulp 2·55 tons, finished paper 4·25 tons.

*Mr. Ginwala.*—You have a difference of about a ton?

*Mr. Muir.*—Yes.

*Mr. Ginwala.*—He says that at Home 15 cwts. is what they use per ton. He says "in wood pulp manufacture the coal consumption is from 15 cwts. to one ton of English coal per ton of dry pulp. We think the consumption will be well covered by putting it at  $1\frac{1}{4}$  tons per ton of dry pulp, and the cost per ton of pulp will be Rs. 22-8. For moist pulp it will be one ton of coal per ton of pulp costing Rs. 15."

*President.*—Is it an English practice?

*Mr. Ginwala.*—Yes. In the case of wood pulp he takes one ton.

*Mr. Muir.*—We cannot work down to these figures; the quantity depends a good deal on the quality of the coal.

*Mr. Ginwala.*—He takes the Talcher coal.

*Mr. Muir.*—That is rather like his estimates. We have heard a lot about Talcher coal but we have had no opportunity of trying it in bulk.

*Mr. Ginwala.*—On the quality of the Indian coal it would not make a difference of  $1\frac{1}{4}$  tons?

*Mr. Muir.*—It might make a difference of 30 per cent.

*Mr. Ginwala.*—For wet pulp he takes one ton.

*Mr. Muir.*—Yes.

*Mr. Ginwala.*—You are not concerned with dry pulp?

*Mr. Muir.*—Not at present.

*Mr. Ginwala.*—For dry pulp he takes  $1\frac{1}{4}$  tons.

*Mr. Muir.*—That is a difference of 70 per cent. The coal we are referring to is second class Indian coal. The difference between good European coal and good second class Indian coal might probably be 5 cwts. in a ton. Anyway, the difference between the best English coal and second class Indian coal could not be more than 7 cwts. in a ton.

*Mr. Ginwala.*—This is second class coal.

*Mr. Muir.*—We are using second class coal. I don't think it is economical when the plant is running at full capacity, but as we only require a portion of the power which is necessary we are at the present moment on second class coal.

*Mr. Ginwala.*—It is a very big item?

*Mr. Muir.*—Yes.

*President.*—That is to say, your use of coal must be uneconomical on that basis at present?

*Mr. Muir.*—What I mean to say is that tons of coal are not a very good comparison. What you really want is the cost of coal in rupees per ton of production.

*President.*—We found it of extreme importance in the case of the steel industry to get the quantities. Have you got to use a great deal more of the second class coal?

*Mr. Muir.*—It may pay a certain mill which does not require to keep up full steam to use second class coal. That is what I was referring to.

*Mr. Ginwala.*—This cost that he gives is low; including depreciation it is Rs. 166 a ton at Cuttack on a 5,000 ton basis and Rs. 144 a ton on a 10,000 ton basis.

*Mr. Muir.*—I cannot criticise his figures in detail but they seem to me very optimistic.

*Mr. Ginwala.*—Then I will put to you a general question. In your opinion do you think it possible to get down to those figures?

*Mr. Muir.*—It is quite impossible.

*Mr. Ginwala.*—If you take off depreciation it comes to Rs. 139 on 5,000 ton basis and Rs. 131 on 10,000 ton basis.

*Mr. Muir.*—All his figures are far lower than what we have been able to work out in practice, and I don't think we have been accused of not running

the plant as economically as it is possible to run it. May I take the 5,000 tons in comparison with 5,500? Cost of labour we have commented on; cost of coal we have commented on. As regards labour and superintendence, our figure is practically double his, which I think you will admit is expensive, even allowing that we include the manufacture of pulp into paper which Mr. Raitt does not.

*Mr. Ginwala.*—The figure you have given for ordinary current repairs, Rs. 12.76, is a good deal higher than his.

*Mr. Muir.*—We have got mill labour Rs. 36.40, and he admits that labour is difficult to get there, and he put it at Rs. 20. We have put ordinary current repairs at Rs. 12.76 and he has got it at Rs. 5. I don't think there could possibly be that difference whatever advantages his proposed plant may have. Supervision he has got at Rs. 20 and we have to include another figure of Rs. 11 to get an exact comparison, so that general supervision in our own case comes to Rs. 47 and his figure comes to Rs. 20. In this figure of his he has included depreciation. In our figure we have allowed no depreciation. Of course the figures that I now quote are the actual figures on our smaller output.

*Mr. Ginwala.*—We would like to compare these figures with the other figures when we get them. Then, I was trying to work out your costs under various other headings right through and I was out by several rupees. There must be some mistake.

*Mr. Muir.*—The amount of unbleached pulp differs from the amount of bleached pulp owing to the addition of imported pulp.

*Mr. Ginwala.*—I have taken everything into account.

Primary raw materials . . . . .	110.45
Purchased unbleached pulp . . . . .	40.23
	<hr/>
	150.68

*President.*—It would be better if we have the figures from Mr. Muir. It is really the headings of Form II except that you end up in finished paper instead of in unbleached pulp.

*Mr. Muir.*—You want the cost of manufacturing paper with the added effect of purchased pulp?

*President.*—No. What we want is the works cost per ton of finished paper as if you have simply started from the beginning without worrying about the intermediate stages.

*Mr. Ginwala.*—In the same way in which you keep your cost sheet.

*President.*—Take the heading of Form IV and substitute raw materials for manufactured bleached pulp and strike out the word bleached in Form III.

*Mr. Ginwala.*—But this purchased pulp goes into your bleaching account.

*Mr. Muir.*—It is purchased unbleached pulp and is mixed with our unbleached pulp.

*Mr. Ginwala.*—You have shown it as cost of bleaching. Your cost will appear in an unfavourable light if you add the cost of pulp to the bleaching process.

*Mr. Muir.*—I am afraid I do not quite follow.

*President.*—If you divide Form III into 'materials' and 'cost above materials' it would come as 'materials' and not 'cost above materials.'

*Mr. Ginwala.*—If anybody looks at the account as a whole, he will say that the cost of your bleaching is the difference between Rs. 326.75 and Rs. 265.02. That is not the case, is it?

*Mr. Muir.*—I see, your point is that bleaching looks very expensive?

*Mr. Ginwala.*—It comes to Rs. 61.73, whereas you ought to deduct Rs. 40.23 from that.

*Mr. Muir.*—The difference in cost of unbleached pulp between Forms II and III appears to be Rs. 26 a ton, but this apparent difference is due to the reduction in costs per ton owing to the increased production due to the addition of purchased pulp.

*Mr. Ginwala.*—I am sorry I don't understand. You take the unbleached pulp in Form III. The cost is Rs. 239.65.

*Mr. Muir.*—If you want to take the actual figure, the cost of purchased pulp must be added and it comes to Rs. 280 roughly.

*Mr. Ginwala.*—But your own unbleached pulp costs you only Rs. 265.

*Mr. Muir.*—The purchased stuff appears rather expensive because our manufacturing figures do not include overhead. They are only actual works cost.

*Mr. Ginwala.*—I understand it now.

*President.*—Supposing you have a sufficient supply of your own pulp, what would be the figure? It would not be Rs. 280, if you don't have to purchase pulp from outside?

*Mr. Muir.*—It would be Rs. 265.

*President.*—Unless there is no loss.

*Mr. Muir.*—There is very little.

*President.*—Is the loss negligible?

*Mr. Muir.*—That is so.

*Mr. Ginwala.*—I asked Mr. Carr yesterday about it and they did not seem to get that result.

*Mr. Muir.*—It is a question of estimation.

*Mr. Ginwala.*—It is not. It is a question of fact. You get from one ton of pulp pretty nearly one ton of paper.

*Mr. Muir.*—Yes, after the addition of further raw materials.

*President.*—The wastage is compensated by the addition of further raw materials in the process?

*Mr. Ginwala.*—They also use further raw materials. Other things remaining the same, you get from a ton of unbleached pulp one ton of paper?

*Mr. Muir.*—You have to add thirty-five rupees worth of auxiliary raw materials.

*Mr. Ginwala.*—They also had to. They said that they would use 1.20 tons of pulp for one ton of paper.

*Mr. Muir.*—We would give you a similar figure if we take our added raw materials also.

*Mr. Ginwala.*—That is not the thing. I may be wrong. But that is my impression.

*Mr. Muir.*—Did Mr. Carr include the added raw materials?

*Mr. Ginwala.*—He said that they would want 1.20 tons of pulp to make one ton of paper.

*Mr. Muir.*—There is a loss, I admit, but it is made up by these auxiliary raw materials.

*Mr. Ginwala.*—What is this freight—item No. IX in Form IV—of Rs. 28 for?

*Mr. Muir.*—That is what the President was discussing with me. That is the freight we pay. We get a delivered price for our paper and we have to pay freight out of that. That is the total freight that we have to pay.

*Mr. Ginwala.*—You surely don't add that to the cost of production. It comes out of your takings.

*Mr. Muir.*—That is the way we work it out.

*President.*—In comparing prices realized by you and the others, we should go wrong. It is separated out here. Would it not be right to take Rs. 457 as your works cost?

*Mr. Muir.*—If you deduct the freight from the price realised, you will get the sale price f.o.r. mill.

*Mr. Ginnala.*—When we take your sale price, we will have to deduct that.

*Mr. Muir.*—According to the estimate you want you will have to deduct it.

*Mr. Ginnala.*—Can you give us figures for your pulp plant and the paper plant separately?

*Mr. Muir.*—It is very difficult to differentiate. But I suppose we can do that. I think that we can give you an estimate.

*Mr. Ginnala.*—We want to find out the cost of producing pulp alone.

*Mr. Muir.*—I would like to emphasise I don't know whether you will agree with me—that we consider that the manufacture of pulp is really the important thing. The paper process is relatively well-known and comparatively simple. The pulp process, as we have said in our replies to the questionnaire, is the thing that develops the resources of the country. It will be possible to put down a paper mill say in Bombay or Calcutta and use imported pulp, which would be of little or no benefit to the country.

*President.*—I understand your position.

*Mr. Kale.*—Don't you think that your cost of developing the resources must be brought down to the cost of developing *sabai* grass and other resources of the country?

*Mr. Muir.*—My hope is that it will go lower.

*Mr. Kale.*—Only in that case what you say would be justified. I understand that it is of very great importance to the country that processes should be discovered by means of which raw materials which are not being utilised to-day will be utilised for the manufacture of paper.

*Mr. Muir.*—Yes.

*Mr. Kale.*—But in the long run the cost of utilising these raw materials will have to come down to the cost at which other raw materials are being utilised to-day, if not lower.

*President.*—Is it not an essential condition of the development which you regard as desirable, and which you expect to see, that the cost of making paper from bamboo should be decidedly lower than the cost of using grass?

*Mr. Muir.*—We hope that it will be.

*President.*—Because in the case of grass at present there is a shortage of supplies, and some mills are using imported pulp.

*Mr. Kale.*—You have put down the value of your patent rights at Rs. 3,80,000. Is that the actual price you have paid?

*Mr. Muir.*—Yes. We paid shares worth that amount.

#### IV. POWER (INCLUDING FUEL).

*President.*—In your answer to Question 53, you have given us the operating cost of your electricity supply.

*Mr. Muir.*—Yes.

*President.*—It is difficult to compare that with anything. Have you worked out any calculation to see what it would have cost you if you had bought your power from the Electric Supply Corporation?

*Mr. Muir.*—No. The same boilers supply the digesters steam, the power for the turbine, which makes the electric current, the motive power for the paper mill engine and so it is very hard to differentiate. We can only make calculations.

*President.*—It is not very important. Does the Electric Supply Corporation go out as far as your mill?

*Mr. Muir.*—No.

*President.*—So you have got to produce your own electric power?



*Mr. Muir.*—Yes.

*President.*—In your answer to Question 56 you say that you use approximately 4'25 tons of coal per ton of finished paper produced. Is that the actual rate at which you were using coal last year?

*Mr. Muir.*—It does not quite agree with the total works cost given in form I and the reason for that is that last year we used a certain amount of first class coal which does not make the figures quite the same.

*President.*—You have not yet answered my question. Is it, or is not, the quantity you actually used last year?

*Mr. Muir.*—4'25 tons is a little high.

*President.*—You have actually used less than that?

*Mr. Muir.*—Yes, because we used a certain amount of first class coal.

*President.*—With a plant of larger capacity, would not the coal consumption tend to lower the cost still further?

*Mr. Muir.*—Oh, yes.

*President.*—When do you expect that? In the estimate as to what the cost might go down to, it would be useful if you would indicate the coal consumption on which the figure shown against coal and fuel is based.

*Mr. Muir.*—I have got the figure here in rupees which, as I suggested, was the better comparison.

*Mr. Ginwala.*—You might give us also the quantities.

*Mr. Muir.*—The figures are 41'6 and 56'8.

*President.*—What is the coal consumption per ton of paper?

*Mr. Muir.*—It appears to work out to 3'1.

*President.*—That is a considerable reduction.

*Mr. Muir.*—Yes.

*President.*—You do anticipate that you will be able to work down to that?

*Mr. Muir.*—That is our estimate.

*President.*—The figure that you have now given of fuel consumption per ton of unbleached pulp is 2'1.

*Mr. Muir.*—Yes.

*President.*—That was on the same basis as 4'25 tons for finished paper?

*Mr. Muir.*—Yes.

*President.*—As 4'25 tons has been reduced to 3'1, the other figure would simply go down in proportion.

*Mr. Muir.*—I hope so.

*President.*—For rough calculations, would it be sufficiently accurate if we worked on that basis?

*Mr. Muir.*—Yes.

*President.*—In that case you would not be far out if we get down to that?

*Mr. Muir.*—We get 1'6 for unbleached pulp.

*Mr. Kale.*—You don't use electricity for the paper-making machine?

*Mr. Muir.*—No.

*Mr. Kale.*—Why not?

*Mr. Muir.*—It is found that the steam engine gives what you might call a more sympathetic drive. That is the only place where we use the steam engine.

*President.*—What do you mean by "sympathetic drive"?

*Mr. Muir.*—In the case of electricity, you cannot vary the speed gradually. One knows it from one's overhead fans.

*Mr. Ginwala.*—You use it to produce the finer qualities of paper?

*Mr. Muir.*—Yes, you have got to run it somewhat slower.

*President.*—Then there is the question about market. On this question of the export trade, undoubtedly it is one of the possibilities of the future which has got to be kept in the future. But do you regard it as a possibility, say, in the next ten years?

*Mr. Muir.*—Yes.

*President.*—Then, the question of price comes up, whether they can get down to the price. Either your cost has got to come down or the world price has got to go up. I have no doubt that both processes will get to work.

*Mr. Muir.*—If you can develop the industry under the shadow of a protective tariff, I think that there are tremendous possibilities—I would say rather probabilities.

*President.*—The whole question is how far the possibility of export trade could really affect our recommendations except as a hope for the future. It seems to me, on all that has been said in your representation and all that I have read about it, it has never appeared to me that there is sufficient data to feel confident as to its developing, say, within the next ten years.

*Mr. Muir.*—One might reasonably hope that it would.

*President.*—You can hope, but I cannot say that you can reasonably hope. I lay a little stress upon the importance of not being too sanguine about developments. It is quite possible for forecasts to be entirely accurate in substance and entirely wrong in the date of their fulfilment. Hitherto Government have had no data except the anticipations of their own experts. Your claim is that using a sulphite process you have proved that bamboos are an admirable paper-making material, and that the problem of how to use it has been solved. In that case it is for you to show that bamboo pulp can be produced at prices that would produce the great development you expect.

*Mr. Muir.*—Given the protection we ask for, we will be able to work at a sufficient profit to encourage us to go further with the matter.

*President.*—Quite, but that is not the claim you put forward in your representation. If you want the Board to accept the statement that you have made about the possibility of an export trade, you have got to show that the cost of production could be brought to a figure at which you could compete in the world's market.

*Mr. Muir.*—If we were at present able to compete in the world's market, or very close to being able to compete, we should not be in such urgent need of protection.

*President.*—It does come to that pretty nearly, but in that case is there any prospect of exports in the immediate future?

*Mr. Muir.*—I think it will be a prospect within 10 years.

*Mr. Ginwala.*—Before we get to the export stage you must first meet the demand of the whole country. That is the natural process.

*Mr. Muir.*—Yes.

*Mr. Ginwala.*—There is still, say, about 50,000 tons more required on the assumption that the demand does not vary much in the meanwhile. It takes about five years, I take it, from the time you start the project to reach your full production. Two years after you actually started your work you have not yet got your full production.

*Mr. Muir.*—We have got full production of the work: we started two years ago.

*Mr. Ginwala.*—I mean the economic unit of 5,000 tons.

*Mr. Muir.*—We have not put down the whole plant yet.

*Mr. Ginwala.*—From the time you started your works you have taken two years?

*Mr. Muir.*—But on the works we have put up we are able to produce our normal production.

*Mr. Ginwala.*—Supposing I want to start paper works now, how long will it take before I get to my full output? How long will it take for me to get

the concession from the Local Government? I have got to set men to work the forests, etc. When the President put the limit of 10 years it was a very full limit.

*Mr. Muir.*—Provided you have not an enormous amount of experiment to do, I do not see why we should not obtain full production within two years from the date when the first order is placed.

*President.*—And two more years to get to your full output. It will take at least three or four years to get to your normal cost. It might come sooner if the price of wood pulp began to rise substantially, but that is an element which I do not see how we in this country can gauge at all. It requires expert knowledge.

*Mr. Muir.*—If Mr. Raitt's figures are correct for Cuttack, there is no reason why, as soon as the Talcher Railway is opened, which is expected to be next year, and as soon as a plant is erected down there, he should not be able to compete in the world's market straightaway.

*President.*—Mr. Raitt's figures are not yet authoritative. As we were pointing out, your figures did not quite agree with them. We asked you to let us have the figures showing what the price of pulp would have to come down to to enable you to export both paper and pulp.

*Mr. Muir.*—You have asked for that.

*President.*—In your answer to Question 70 you say that the pulp is imported on account of the inadequacy of present supply which, however, is due to the fact that economic conditions make it impossible for foreign manufacturers to land their material into this country at unremunerative prices.

I think it should be 'possible'.

*Mr. Muir.*—Yes.

*President.*—In the answer to the same question you say "previously a certain amount of wood pulp was imported for certain special qualities of paper. It is now possible to manufacture from bamboo pulp any paper that can be manufactured from wood pulp." We have touched on this point before. There are some expensive writing papers anyhow.

*Mr. Muir.*—I would like you in support of my statement to examine the Controller of Stationery and Printing, Mr. Ascoli, and I think he will bear us out that our paper is as good as the Home manufacture, and I think that is a very big thing.

*President.*—You say in answer to Question 71 "We estimate the present domestic market for Indian pulp at 10,000 tons. The possible market is capable of almost unlimited expansion as the country develops." But is there unlimited market for anything in India? The markets are closely limited.

*Mr. Muir.*—We are supported in that statement by our opponents who arrive at it by multiplying the population by so many tons of paper.

*President.*—The only people who are taking a large quantity of paper are the Government, and as the bureaucratic Government gradually vanishes the amount of paper used may decline.

I do not understand the last sentence in your answer to Question 71 "Sulphate and mechanical pulps are also imported. The latter is not an economical pulp to import, because it degrades the quality of the paper made without any compensating economy in production."

*Mr. Muir.*—I understand that mechanical pulp is made into newspaper by a special process.

*President.*—Which would not apply to the use of mechanical pulp in India?

*Mr. Muir.*—No.

*President.*—I should imagine paper mills would not import it unless it was good enough for their purpose and also the cheapest. But you say that sulphate and mechanical pulps are also imported?

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\*The written reply has been corrected.

*Mr. Muir.*—I think mechanical pulp is imported in very very small quantities.

*President.*—Is this point really of any importance?

*Mr. Muir.*—No.

*President.*—The classes of paper which are imported into India at present are as follows—

- 6,000 tons of packing paper.
- 19,000 tons of printing paper.
- 7,000 tons of writing paper.
- 12,000 tons of other kinds and envelopes.

Those all come to 44,000 tons. You put the production at 33,000 tons. That only comes to about 77,000 tons. I am not quite sure how you got the total of 93,000 tons.

*Mr. Muir.*—I think these were taken direct from the import figures. Perhaps your figures are more recent. Our figures were taken from the Abstract Table of imports for 1922-23.

*Mr. Ginwala.*—I am inclined to think that you have included straw boards and things of that kind.

*Mr. Muir.*—I have taken out the figures under five headings: packing paper, printing paper, writing paper and envelopes, imports of paper—other kinds, and paste board.

*Mr. Ginwala.*—Card boxes, confectionary covers, etc., I think.

*President.*—We have ourselves taken the figures from the returns but left out things like straw boards, etc.

*Mr. Muir.*—As regards writing paper and envelopes. I understand there is already a factory for making these.

*Mr. Ginwala.*—Take the case of paste boards, mill boards and card boards. You won't perhaps make them out of bamboo pulp.

*Mr. Muir.*—No, it would be expensive, but some other mills would make them.

*Mr. Ginwala.*—One mill, I know, made tickets and labels but they were not much of a success. The raw materials are precarious here.

*Mr. Muir.*—In the Rajamundry mill they have got two plants. One is using paddy straw, I know.

*President.*—If any of these mills included paste boards in their claim for protection they have got to say so. We cannot assume that things which are not mentioned are included.

*Mr. Kale.*—When we speak about the prospect of the export of paper do you make it independent of internal consumption?

*Mr. Muir.*—You mean that we assume that we shall completely supply internal consumption before any paper is exported?

*Mr. Kale.*—No. I take it the other way. It may just be possible that you may be able to export paper before you satisfy the internal demand for this reason that you have to meet railway freight which may be prohibitive, and perhaps steamer freight may be much more convenient than railway freight in the country.

*Mr. Muir.*—It may be. I would anticipate, if one may look into the future, that, if protection was given, the result of that would be that you would see mills being built at various suitable points, but it might just be possible that one mill in one part of India might be exporting, while paper was being imported into another part of India.

*Mr. Kale.*—That was my point: on account of the great distances covered in this country and the heavy railway freights that have to be paid it may be possible.

*Mr. Muir.*—But I would anticipate that mills will be erected at various points to minimise that disadvantage.

*Mr. Kale.*—And some mills may perhaps find it profitable to export rather than cater for internal demand.

*Mr. Muir.*—It might be possible but not I should think in any large quantity.

*Mr. Kale.*—In answer to Question 66 you say "these prices include free delivery." Which prices do you refer to?—all the prices included in the answer or only in the latter part of the answer?

*Mr. Muir.*—All of them.

*Mr. Kale.*—It extends also to Government purchases?

*Mr. Muir.*—Yes. They tell you where they want them to be delivered. In the case of up-country deliveries the price is ex-mill but a discount of 1 per cent. is allowed on these deliveries.

*Mr. Kale.*—So the prices are uniform?

*Mr. Muir.*—Yes.

*Mr. Kale.*—If the distances vary, you get various prices from your customers?

*Mr. Muir.*—We adjust our price accordingly.

*Mr. Kale.*—You give the prices paid to you by the E. B. Railway and the O. & R. Railway. They seem to be the same. If the freights vary how are these prices the same?

*Mr. Muir.*—The only item supplied to the O. & R. Railway was 2 tons Blotting which is 2 pies per lb. above the price for the E. B. Railway.

*Mr. Kale.*—In answer to Question 69 you make a general statement that pulp is sold below the cost of manufacture by several concerns in Europe. It is only hearsay information: you have no direct information?

*Mr. Muir.*—We have no information that we can produce, but I understand that it is borne out by our competitors who are paper manufacturers at Home.

*Mr. Kale.*—If you could give us some concrete information it would be useful. These general statements are of little use to us.

*Mr. Muir.*—That is a class of information which it is almost impossible to get, but I will do what I can.

*Mr. Ginnala.*—You can give us extracts from speeches of Managing Directors at company meetings where they say that there is no dividend to be paid on account of this.

*President.*—We may be able to get certain information from other sources, but it will be useful if you can give us that.

*Mr. Muir.*—We will do our best but that will necessitate our referring Home.

*President.*—In answer to Question 73 you say that you anticipate that competition will become keener from Germany as you believe it is this country's intention to give very low freights to exporters by German lines. One knows of course that, before the war, the German transport system, by rail and sea, was very elaborately organized to favour German exports, but is this expression of your views merely an intelligent anticipation based on what they did before, or is there anything more behind it?

*Mr. Muir.*—It is nothing more than an intelligent anticipation. I have nothing by way of proof.

*President.*—Therefore, at this stage, all that we can say is that it is a factor which might prevent any rise in the price of paper. Competition in the paper trade is likely to be intense for some time to come. To that extent I regard it as perfectly reasonable. One would want a little more evidence to make more of it than that.

Then, in answer to Question 74 you say "Competition is particularly keen in white printings and writings." We were told, for instance, by Mr. Carr that practically all the *hodami* and unbleached paper that was used in the

country was made in the country. It does not so much concern you, this *badami* and unbleached, as it concerns them?

Mr. Muir.—We are making it chiefly under compulsion to-day.

President.—What kind of imported paper would practically tend to keep the prices of *badami* and unbleached down? There must be something foreign which could be used for the same purpose, otherwise the prices would be determined solely by internal competition. What it comes to is this that the foreign mills do not make that kind of paper, but it is conceivable that the cheaper kinds of paper they make could be used and would be used if the prices of *badami* and unbleached went up.

Mr. Muir.—I think the consumption of newsprint has actually gone up.

President.—Do you think that paper of this kind would be used for that kind of purpose?

Mr. Muir.—I think so.

President.—I imagined that the Indian consumer was fairly conservative in the matter and would not change very readily.

Mr. Muir.—Cheapness is a very great factor, and newsprint comes in at a figure considerably cheaper even than *badami*.

President.—If the difference is made a little wider what would be the result?

Mr. Muir.—I think it is reasonable to suppose that increased consumption of newsprint might be the result.

President.—You have said that competition is particularly keen in white printings and writings and then you say in the next answer "The paper with which we have to compete is made from wood pulp and esparto grass." Is printing paper made mostly from wood pulp?

Mr. Muir.—Yes. A certain amount of other papers I understand, chiefly German, is coming in partly made of mechanical pulp.

President.—What class of grass are these papers that come into India made from?

Mr. Muir.—Esparto grass; they are chiefly the better class of paper.

President.—Would it be writing paper or some other kind?

Mr. Muir.—I think it is the higher class of writing papers.

President.—In answer to Questions 76 and 77 you say "Although the duty has been calculated on the *ad valorem* value instead of on the tariff valuation, it will be noticed that an additional 5 per cent. has been added by the Controller which compensates for this difference." You mean to say that the Controller of Printing has calculated the duty incorrectly, that if there is a tariff valuation he ought to have calculated it on the tariff valuation?

Mr. Muir.—I think that approximates to it.

President.—But the 5 per cent. is intended to cover quite different things, probably the fact that if he imported the paper he would have to stock it, whereas if he purchases from the local mills they practically carry it for him.

Mr. Muir.—The 5 per cent. is intended to be an allowance to the local mills for this, but the calculation of duty *ad valorem* neutralises its benefit to us.

President.—I understand that is the main reason for the 5 per cent.; is the one I have given, there may be subsidiary ones as well. I think if he has incorrectly calculated the duty it ought to be correctly calculated, but it would not make so very great a difference.

Mr. Muir.—I think that is correct.

President.—Is the tariff valuation higher or lower than the invoice value?

Mr. Muir.—The tariff valuation is higher because it is the market price in the country. I don't know if I can bring it in in this connection that I have got here some original invoices, and it is interesting, in view of our competitors' report of mills in England losing money, as illustrating our argument in connection with what you might call (dumping), that they themselves are

importing, for instance, Austrian white printing and we have heard that they are importing German cream laid.

*President.*—We shall be glad to have any invoices you can give us showing the prices at which imported paper is entering the country.

*Mr. Muir.*—It has special reference to a statement made by importers that mills in England are losing money, because it shows that, although the mills are losing money, these countries with depreciated exchange are able to land their papers at a lower price, because they are English concerns and importing German papers in preference to English.

*President.*—I don't think Germany or Austria is at the present moment a very good example of the depreciated exchange. In Austria the exchange has been stable for months past, and in the case of Germany there was a period not so long ago when prices were considerably higher than prices elsewhere. However, we shall welcome any information you can give us as to the prices at which paper is actually entering the country. When you get back to Calcutta if you will send us copies of the invoices which you think would be useful to us, we shall be glad to have them.

*Mr. Muir.*—Yes, I shall do so.

*President.*—In your answer to Question 79 you say "Regarding pulp, a glance at any recent Trade Journal will show that the market is giving producers a good deal of anxiety, and many mills in Scandinavia are running at a loss on the figures now prevailing." If you could help us by giving extracts from trade journals it would be useful.

*Mr. Muir.*—I will.

*President.*—In answer to Question 85 (c) you say "Ordinary labour per head is cheaper in this country, but owing to larger numbers being necessary to do any particular job, and the fact that spare men have to be kept for replacement and training in case of illness, the actual cost does not show any advantage as compared with Western countries." Taking the case of your own mill you have given the number of men employed. Supposing your mill had been in England instead of in India, how many men approximately would you employ?

*Mr. Muir.*—I cannot give you that answer without reference.

*President.*—It would be useful, because the information we had from Mr. Carr was that for every 12 men employed in India, 3 men would be employed to obtain a similar output in England. The point that I brought to his notice was this, that English wages are more than 4 times as high as Indian wages, and if he employed 4 times as many then his labour cost per ton of output was probably below the British. You may be quite right in the opinion you have expressed that the actual cost does not show any advantage as compared with Western countries, but it would be useful to examine the point from that point of view.

*Mr. Muir.*—You want the relative cost per ton?

*President.*—If your people at Home could give us the information it would be useful.

*Mr. Muir.*—I think they would probably be able to give it; they have much experience in the paper trade.

*President.*—We want figures which can be called typical. Anything that they could send out would be exceedingly interesting. In the next clause you say "Owing to labour not yet having become accustomed to working for a new industry which they regard with suspicion, we are at present at a disadvantage in this respect." Does that apply to both classes of labour, or only to the people in the field?

*Mr. Muir.*—That refers only to the people in the field. We have specifically said "for collection and transport."

*President.*—Then in clause (e) you give figures for bleaching powder and the extra cost which the Indian manufacturer has to incur. If you made

your own bleaching powder, a part at any rate of that disadvantage, I take it, would probably disappear?

*Mr. Muir.*—Yes.

*President.*—So that the disadvantage in bleaching powder is temporary?

*Mr. Muir.*—We hope to be in a position to put up our bleaching plant and the conditions will then improve.

*President.*—Then you say "We believe freights in this country are higher than in England owing to the long distance between various consuming centres." From the figures given by you elsewhere it applies equally to yourselves and to the importer?

*Mr. Muir.*—That is so.

*President.*—In the case of this particular industry you both start from the same point?

*Mr. Muir.*—That is so as regards paper imported through Calcutta.

*President.*—You have got an advantage of 30 miles which is not very much.

*Mr. Muir.*—Yes.

*President.*—There have been in the past frequent complaints. I remember that a match factory at Ahmedabad complained that the freight from Bombay to Delhi was a good deal less than the freight from Ahmedabad to Delhi, but you actually get as low rates as the importer gets.

*Mr. Muir.*—We do not go into the Bombay market, but to Rangoon the freights are possibly nearly as high as the importer has to pay.

*President.*—I think that is very likely the case, but still from the broad point of view it is not of great importance if paper mills are likely to be established in Burma.

*Mr. Muir.*—That is right.

*President.*—That is not a market you can permanently hold from Calcutta, if they ever get going in Rangoon.

In answer to clause (h) you say "There is no bleach-making industry in India, and we do not know that it is even suggested that this commodity should be manufactured in this country." You mean manufacture for sale?

*Mr. Muir.*—Yes, manufacture for the market.

*President.*—In answer to Question 86 (a) you say "Should the industry expand sufficiently to justify the engineers putting down paper-making plant machinery, this would tend to disappear." There again I put to you the point that, on the contrary, it might become accentuated.

*Mr. Muir.*—I accept the correction; in any case I think that such specialised machinery is not likely to be manufactured within our figure of ten years.

*President.*—All that is likely to be manufactured is conceivably simple kinds of spare parts for engineering firms.

*Mr. Muir.*—Even in the case of great industries like the jute industry and the cotton industry, the manufacture of machinery for them has hardly begun.

*President.*—Then in clause (f) you say "We hope that freights on finished goods will be reduced in the near future, and also that special concessions will be given to finished goods." So far as your railway freight up-country is concerned, I don't quite see why it would do you much good. So long as the railways are administered on commercial principles, it is very difficult to give any lower rates to goods manufactured in India than to goods imported from abroad. So that it is really the consumer who is likely to benefit out of any reduction in freight.

*Mr. Muir.*—It is true. It might be possible that we might get reduced rates by sea.



*President.*—I have not seen the Report of the Indian Mercantile Marine Committee. Sea freight reduction is very desirable, if possible, but we cannot calculate on it as yet. Of course, it is altogether anomalous that the freight from Calcutta to Rangoon should be as high as it is. However, that is a very wide question that we cannot explore.

*Mr. Kale.*—Among the countries that compete with you you have not mentioned Austria. Is not Austria a producer of paper?

*Mr. Muir.*—I should have put in Austria. In fact two out of the half a dozen invoices I have brought in are Austrian.

*Mr. Kale.*—Do some of the countries, Norway and Sweden, for instance, specialise in pulp production or do they manufacture both pulp and paper?

*Mr. Muir.*—I am speaking without expert knowledge, but I understand Norway and Sweden are chiefly pulp producers.

*President.*—A great deal of paper then comes from these countries. For instance, take the average figure for the 4 post-war years. Out of 19,000 tons of printing paper 8,400 came from Norway and Sweden, much more than any other country sent. Next comes the United Kingdom with 5,700 tons. So it does not mean that only pulp is manufactured in Scandinavia. These countries account for more than two-fifths of the whole imports of printing paper.

*Mr. Kale.*—Do the manufacturers in the United Kingdom import their raw materials for the manufacture of paper?

*Mr. Muir.*—I believe entirely.

*Mr. Kale.*—So that the manufacturers there, as compared with Germany and Scandinavia, are not in a favourable position?

*Mr. Muir.*—I think especially as compared with Scandinavia.

*Mr. Kale.*—Yet how is the United Kingdom able to compete with this country?

*Mr. Muir.*—I think it is her geographical position that enables her to compete.

*Mr. Kale.*—Or is it her mechanical efficiency? Is that the advantage which the United Kingdom enjoys over other countries?

*Mr. Muir.*—That I cannot tell you.

*President.*—In paper as in many other things the industry is largely dependent on cheap coal. England had a big advantage in that respect, but it has been lessening and it is a question how long it will continue.

*Mr. Kale.*—I think in Scandinavia they now use water power.

*Mr. Muir.*—Yes, chiefly.

*Mr. Kale.*—In answer to Questions 76 and 77 you give the prices that you have obtained for your papers, and the price of imported paper. Are your prices governed by the price of the imported paper?

*Mr. Muir.*—They are very largely governed by the price of the imported paper—we may say by the world's prices of paper.

*Mr. Kale.*—You say in answer to Question 85 "Customs duty is a severe handicap indeed and, while we do not object to a high duty where the materials taxed in this way are being satisfactorily manufactured in this country, it does seem wrong that materials which no one is manufacturing suitably in this country should be heavily taxed." You assume there that these import duties are protective. They are revenue duties levied irrespective of the effects upon manufacture.

*Mr. Muir.*—Yes, but I don't think we touch upon this point: we just show that it is a severe handicap.

*Mr. Kale.*—I just wanted to draw your attention to the fact that, when these duties were levied, Government wanted revenue from whatever source it might come, and they imposed these duties. Now it is for you to convince

the Government and the Legislature that they ought to sacrifice this revenue which they are receiving from these raw materials in order to assist the industry. So the answer will turn now upon the policy which has got to be modified.

*Mr. Muir.*—Is there a question of Government removing these duties to help the industry?

*Mr. Kale.*—The whole question how far the tariff can be modified or special concessions made to prevent the revenue tariff operating to discourage Indian industries is sure to come up.

At the end of your reply to Question 86 you have expressed the hope that the Customs duties on raw materials would be temporary. Whether they are temporary or permanent will depend on what policy the Government pursue in view of the protection?

*Mr. Muir.*—It depends on what view they take as to the protection of the various industries.

#### VII. EQUIPMENT.

*President.*—As regards Question 87, from what was said this morning, I understood that you regard a mill of 5,000 tons capacity as the smallest economic unit.

*Mr. Muir.*—Yes. That is just double our plant.

*President.*—Have you any information as to the size of paper mills in England?

*Mr. Muir.*—No.

*President.*—It might be useful to know whether that 5,000 ton mill would be regarded as big enough in England, or as rather on the small side.

*Mr. Muir.*—I would probably be able to send you that directly I get to Calcutta.

*Mr. Kale.*—In your answer to Question 88 you have attempted to make out what appears to me to make a very good point, namely, that if imports of paper alone were to be subject to a higher duty without pulp being protected, the real work of protection would not be done, because it is more important from the national point of view that its raw materials which are lying waste should be exploited and, if pulp is allowed to come free into this country, or with a small duty imposed upon it, then it is just possible that imported pulp might be used for manufacturing paper.

*Mr. Muir.*—Yes, and almost the entire benefit of protection, apart from the question of income-tax, might be lost to the country.

*Mr. Kale.*—It would be prejudicial to the best interests of the industrial development of the country.

*Mr. Muir.*—I should think so.

*Mr. Kale.*—The development of the country depends upon the exploitation of its raw materials.

*Mr. Muir.*—Yes.

#### VIII. CAPITAL ACCOUNT.

*President.*—In your answer to Question 99 you say "We regret it is not possible for us to give an estimate of present-day cost owing to the short time available." We should be very grateful if you could send us the information later on.

*Mr. Muir.*—Yes, I shall send it you.

*President.*—We should also be grateful if you could try and get us information simultaneously as to what the capitalisation per ton of output is in a country like England.

*Mr. Muir.*—Yes. That would have to be for paper alone I think.

*President.*—Yes. The reason why I ask for this information is to get a measure of the handicap under which the manufacturer in India labours.

*Mr. Kale.*—In the same answer you say “We do not see any reason to suppose that the operating cost of any new mill could be less than ours.” Why do you say that? Is it because you have an up-to-date mill?

*Mr. Muir.*—That is, as regards efficiency.

*President.*—As regards Question 113: the question is “Are you in a position to furnish the Board with information as to the works cost of pulp and paper in any competing country for any year since the war” and you say that you could not give us at the time available. That I can understand. There again, if you think it likely that you can get us the information, we shall be grateful.

*Mr. Muir.*—I think that we shall be able to obtain valuable figures from England.

*President.*—They may know of discussions on the subject in technical journals or even in publications of various kinds.

*Mr. Muir.*—There is a sort of established practice. For instance, many people could tell you what it costs you to put up a jute mill to-day. They could tell you without giving away any technical secrets.

#### VIII. (iii) AGENTS' COMMISSION AND HEAD OFFICE EXPENSES.

*President.*—In your answer to Question 126 you say “If commission was paid, it would be 2 per cent. on nett sale-proceeds.” I am not quite sure that I understand what the the nett sale-proceeds are.

*Mr. Muir.*—That is, deducting just the freight.

*President.*—That is practically on the output?

*Mr. Muir.*—Yes. But we have not drawn anything.

*President.*—Is not that unusual?

*Mr. Muir.*—It is very usual in this country. Our competitors (the importers) refer to it as a reason why some of the paper mills have been and are turning out large quantities. I don't think that it is very fair. The bulk of the jute mills are paid on outturn, and certainly for the last two years they have been running only four days a week.

*President.*—The main importance to us is just to what extent this is a fair charge to take into account in framing any proposals we may make about protection, and if the result was to increase substantially the profit that had to be earned as compared with another system of calculations of commission, I hold provisionally that it is inadmissible.

*Mr. Muir.*—This is the most usual way of remunerating Managing Agents.

*President.*—We have not come across it hitherto. In all the cases that we have seen so far, the commission is calculated on profits and that has certain obvious advantages. It is a stimulus to the Managing Agents to earn profits.

*Mr. Muir.*—I may mention that if we were paid by a commission on profits, our office allowance would need to be considerably higher.

*President.*—Is this Rs. 1,000 allowed for Secretaries, separate from the commission?

*Mr. Muir.*—Yes.

*President.*—How would the office allowance be increased?

*Mr. Muir.*—The Agent knows that he can rely on receiving something out of commission on output. In the case of a commission on profits which may or may not materialise, the usual practice is for the office allowance to be fixed at a higher rate, to cover expenses.

*President.*—It occurred to me the most reasonable way of dealing with the Managing Agents' commission is somewhat as follows. In a certain sense

part of the Managing Agents' commission is a perfectly fair charge in the cost of production, because the agents incur expenditure and it must be incurred by somebody on behalf of the industry. That work has to be remunerated, but it is a little embarrassing for the purpose of our calculation to say that the fair rate of Managing Agents' commission is so much. We are hardly in a position to pronounce dogmatically on that point, and therefore it seemed to me that a simpler way of dealing with it might be found. The figures I am giving are purely illustrative. If 8 per cent. is a fair return on the capital to the shareholders, then we might take a slightly higher rate, say  $8\frac{1}{2}$  per cent. or  $8\frac{1}{4}$  per cent., to cover the commission. Do you think that that would be a reasonable way of dealing with the matter?

*Mr. Muir.*—I think that it would be a reasonable way of proceeding.

*President.*—When we propose protection we have to make a recommendation to the Government of India that a duty should be imposed at a certain rate. One of the reasons we give is that the fair price for the manufacturer in India is so much. In arriving at this price, we have to include a fair profit on the capital required at a reasonable rate of interest, and my suggestion is that the rate should be raised a little to cover the Agents' commission. It does not affect anything except our recommendation as to the amount of protection.

*Mr. Muir.*—If you consider a dividend of 10 or 11 per cent. as a fair dividend for shareholders, that would be a very fair recommendation.

*President.*—I am not asking you to commit yourself to any definite figure, but as to the method.

*Mr. Muir.*—Quite.

*Mr. Kale.*—The only objection that is taken to the Agents' commission being dependent on production is that oftentimes, while the firm is actually making a loss, the Agents continue to receive their remuneration. It has so happened for years in certain factories I know and therefore in Bombay that system has been dropped.

*Mr. Muir.*—You will see that we have foregone all commission from the commencement.

*President.*—Professor Kale is speaking of a state of things which at one time existed.

*Mr. Muir.*—I appreciate the argument. It has been brought up in our part of the world before now.

*Mr. Kale.*—Can we say that there is at any given time in any given country what may be called an average rate for the remuneration of agents?

*Mr. Muir.*—I think that the system of Managing Agents is almost a peculiar one to India, but I think that you can take this as a fair standard of average remuneration.

*President.*—What would the commission amount to in this particular case on your actual output?

*Mr. Muir.*—Rs. 27,000. May I revert to Professor Kale's last question? Of course, it is usual for the Managing Agents to be associated closely with their companies in the share-holding. In fact in a great many companies, the Managing Agents or those concerned with them hold a very large proportion of their shares.

*President.*—To my mind there is the danger that they will get into the habit of a certain procedure where they hold a large number of shares, and it does not occur to them to change the procedure in cases where they do not.

*Mr. Muir.*—It is the usual practice for Managing Agents to be associated with companies by holding shares.

*President.*—All shareholders have equal rights. It may make no difference if a considerable number of the shares are held by the Managing Agents, but it does make a difference where they are not so held.

*Mr. Kale.*—If it is to be generally put it can be put like this. The rate of the Agents' commission must be a rate which must be paid if the initiative in starting industries is to be taken in this country. But I want to put a money value on that.

*Mr. Muir.*—I think that it is open to abuses. That is where the shareholders rely to some extent on the reputation of the Managing Agents.

#### XI. CLAIM FOR PROTECTION.

*President.*—In your answer to Question 132 (a), you claim that the industry has an advantage in the matter of raw materials, cheaper power in the shape of cheaper coal than is obtainable in most foreign markets, etc. That is just the question. Indian coal is undeniably cheaper per ton but is it cheaper per ton of paper, or would it be cheaper per ton if you get your consumption of coal down to 3·1 tons which you hope to do?

*Mr. Muir.*—Whatever basis you take, I think that it is cheaper.

*President.*—After all, when you get down to what you hope to, will your fuel and coal charge be lower than that of the foreign manufacturer?

*Mr. Muir.*—Generally speaking, yes. Of course, if a foreign manufacturer was situated alongside coal mines, he would be cheaper, but generally speaking we would be cheaper.

*President.*—But on the basis of 4·25 tons of consumption, have you any advantage?

*Mr. Muir.*—My remark was merely based on the price of coal per ton of paper. To compare the value of coal, you must consider whether if you have a pound of water to evaporate with Indian coal in Calcutta or the English coal in London, would you evaporate the pound of water cheaper in Calcutta or in London.

*President.*—Unless you can carry it on from paper to water?

*Mr. Muir.*—Don't you go into the efficiency of the process?

*President.*—Taking quality into account it may be necessary to use so much coal in India.

*Mr. Muir.*—That is why I have taken rupees for coal per ton of paper instead of quantity of coal.

*President.*—Given efficient management, you hold that the coal and fuel bill to the Indian manufacturer ought to be lower than to the European manufacturer?

*Mr. Muir.*—Yes.

*President.*—I think some of the mills will have to cut down a bit on their present consumption.

*Mr. Muir.*—Processes are different.

*President.*—I am not thinking of you; I am thinking of the other mills.

*Mr. Muir.*—Other things being equal our coal bill should be on the average less than the Home manufacturers'.

*Mr. Kale.*—Are you referring to your factory or other factories in India?

*Mr. Muir.*—I am referring to the price of coal at our factory.

*President.*—Supposing you were working with the same process at a similar factory in England, would your coal bill be higher?

*Mr. Muir.*—I expect coal bills would be higher in England than in Calcutta, other things being equal.

*President.*—Are they equal in the paper trade?

*Mr. Muir.*—You might have a paper mill at Home situated very near the coalfields and another a hundred miles away from it. The former might be getting their coal cheaper than we can do.

*President.*—That is a thing you have to take into consideration that the British manufacturer has very many opportunities of establishing himself in the closest possible vicinity to his coal, whereas out here you can only do that in one particular district.

*Mr. Muir.*—For instance, the Bengal Mills at Ranigunge.

*President.*—You have got to go to Ranigunge or Jheria—these two areas, if you want to be absolutely beside your coal, whereas the British manufacturer may, within limit, go wherever he likes, and is still close to the coal.

*Mr. Muir.*—He can be close to the sea as well but not nearly so close to the raw material as in India.

*President.*—That is a natural advantage which England possesses and which India does not.

*Mr. Muir.*—But on the whole the cost of our fuel is cheaper.

*President.*—How far from the coalfields does this advantage that India possesses extend?

*Mr. Muir.*—It extends as far as Calcutta, I think, but it has got to be dealt with separately for particular cases.

*President.*—There again, if the industry is to be limited to the area in the neighbourhood of Calcutta and the coalfields, it will be very difficult for them to hold the Bombay market.

*Mr. Muir.*—A company put in the neighbourhood of Talcher coalfields should be at an advantage.

*President.*—Is it not on the other hand rather away from its markets?

*Mr. Muir.*—Not very.

*President.*—I know that coal discoveries have been made in various places, but still coal is not distributed in India favourably for general industrial development. How far on the Western side of India that may be minimised by the use of hydro-electric power is an interesting question. There was a proposition, I believe, to make bamboo pulp in the Western Ghats and use hydro-electric power. Concessions were asked during the war time.

*Mr. Muir.*—I believe that another firm was considering making bamboo pulp on the Bombay side.

*President.*—There may be all sorts of difficulties: communications may be exceedingly bad, and there may be difficulty in regular steamer callings to remove the stuff. However, I think I understand what your view is.

On the next page (still in clause (b)) you say "There are other countries very suitable to the development of the manufacture of pulp and paper from bamboo....." What countries are you thinking of particularly? There must be a great many of course.

*Mr. Muir.*—I think I would rather not disclose it at the moment, but I know there has been project for the development of the bamboo paper industry in at least one other country, and I do think that is an important point because there is a great deal of advantage in getting a start.

*President.*—I quite see the point. There is just this other thing: It may be that the bamboo pulp will not come to its own until the exhaustion of the wood supply has gone a bit further, and raises the price of wood pulp. If on the other hand development is faster than I expect, it may be the other way round. There are both aspects to consider. If you start prematurely, a great deal of money may be thrown away without producing any result.

*Mr. Muir.*—Our advisers in this matter have very vast experience of the paper markets of the world and I understand that they were willing to make a start rather before they did if it had not been for the war, and they did not consider the moment at all premature.

*President.*—One hears a great deal about the exhaustion of wood pulp and it is probable that the rise in prices has become imminent.

In answer to Question 133 (b) you say that the whole needs of the country could be supplied by Home production. That is subject to the importation of newsprint and a small quantity of very high class paper.

*Mr. Muir.*—Unless the demand for that high class paper increases very rapidly, in which case our mills would manufacture it.

*President.*—Even if it did so far it has to depend on linen rags.

*Mr. Muir.*—I think there is a very small proportion of such qualities.

*President.*—But the newsprint is important.

*Mr. Muir.*—Yes.

*President.*—Until at any rate mechanical pulp can be made from bamboo.

*Mr. Muir.*—Yes.

*President.*—In the next answer to Question 134 you say "the pulp industry is the first essential of an independent paper supply. We might put it that the pulp industry is an essential key industry, and given the establishment of pulp industry, paper is bound to follow." I hardly think that that was meant in the sense that you have just got to start and make pulp. Unless somebody is making paper there is nobody to buy pulp in India. Unless you yourself make it and somebody buys it, nothing follows.

*Mr. Muir.*—But if the paper and pulp are both protected, is it not reasonable to say that if the pulp industry is set up and pulp and paper are both protected, does it not necessarily follow that one will follow the other?

*President.*—If you merely mean this, that there is no particular use of developing the paper industry unless there is a pulp industry, then I agree with you, but it rather suggested, to my mind, that the pulp industry can go on without paper.

*Mr. Muir.*—I meant practically what you have said.

*President.*—In answer to Question 135 you say "The world's resources of pulp wood and other primary raw materials are rapidly diminishing, and re-afforestation is a matter of years, whereas India's tropical climatic condition can reproduce paper-making fibrous growth in 3 or 4 years. The paper industry is constantly on the look-out for new sources of suitable raw materials. The two materials which are being particularly experimented with at the moment and on which hopes for the future are being built are bamboo and straw. The manufacture of paper and pulp from bamboo is past the experimental stage now, and as it is an infinitely superior fibre to straw, with reasonable support in the early stages of the industry, there is no reason why bamboo pulp should not in the course of a very few years supply a great proportion of the world's demand for paper pulp." That is, of course, of first class importance. That is a great advantage sooner or later you must have. As the trees go out the bamboo must come in.

*Mr. Muir.*—Yes.

*President.*—In answer to Question 136 you say "We are strongly of the opinion that to impose a duty exempting certain kinds of paper will be to confine the development of paper trade to certain narrow channels and to prevent its spread over the broad fields which it may very well otherwise occupy. Furthermore, for practical reasons, we consider that duty excluding certain kinds of paper will be impossible to administer satisfactorily on account of the practical difficulty in distinguishing the various qualities, especially when there will be every inducement to shippers to try and evade the customs duty." Of course, I quite see there are these practical difficulties, but what about newsprint? Is there any practical difficulty there? I realise there are other reasons for not exempting newsprint, but I want to understand the practical difficulty.

*Mr. Muir.*—I believe that a paper chemist can provide a simple chemist's test by which paper with a certain amount of mechanical pulp can be differentiated from other papers.

*President.*—I imagine the thing could be done.

*Mr. Muir.*—I think it is done.

*President.*—I think newsprint would be a comparatively simple case.

*Mr. Muir.*—May I say we would not object to the importation of newsprint at a reduced duty where it would be confined to the consumption by newspapers? For instance, it would be possible to admit newsprint under license to newspaper companies.

*President.*—I think that suggestion was made by somebody else too, but I do not remember in which representation. It was suggested that it should be imported under a license.

*Mr. Muir.*—There is at present a revenue duty.

*President.*—I think that the newspapers will have a very strong case to put up against the paper manufacturers, and will press that the duty on newsprint should not be raised.

*Mr. Muir.*—We would not object to that.

*President.*—I recognise that. After all, if they are using paper which you cannot make, it is certainly very hard to put up their price because they have still got to continue buying that paper by paying extra, and you get no benefit out of it.

*Mr. Muir.*—Yes.

*President.*—Still there is still practical difficulty on the other side. In the case of the "Statesman," "The Times of India" and other big papers who consume a large amount of paper and who have got a large circulation, their figures could be relied on. It would be very difficult practically if the license system were to be extended to the other newspapers of the country. Some of them might continue to use country-made paper that they use at present, but the economy effected by importing would be larger than at present.

*Mr. Muir.*—I do not suppose a number of smaller newspapers would be in a position to finance themselves for purchases from abroad.

*President.*—But in that case would it be said that the license system was favouring the richer newspapers at the expense of the poorer ones.

*Mr. Muir.*—Smaller newspapers at the present time have to pay more for their newsprint than the larger newspapers who buy direct.

*President.*—This would accentuate it.

*Mr. Muir.*—I should think that most of the newspaper printers could get importers to handle their paper for them under their licenses.

*President.*—What I was contemplating was that only the larger and more influential newspapers could practically take advantage of the license system because they are the only people who import direct.

*Mr. Muir.*—Don't you think that the smaller newspapers would be able—

*President.*—I think any system by which a number of newspapers combined to get their newsprint by importing through a dealer would lend itself directly to a fraud on a large scale. The circulation of a large newspaper can be verified: in the case of a small newspaper how can you depend upon it? These smaller newspapers are run by all standards of men.

*Mr. Muir.*—There is no objection to the newsprint coming in at a reduced duty for the newspapers, but the difference will be so accentuated between the newspaper and the lowest type of other paper that it is a question to what extent it will damage the ordinary paper market.

*President.*—Yet I feel some difficulty on the whole question—this proposal to allow importation of newsprint under license.

*Mr. Kalc.*—I think this inferior kind of paper is used for the type of literature of a temporary nature such as novels and so on.

*Mr. Muir.*—That is what I believe too.



*President.*—Supposing a publishing house came and said “why not give me a license,” how could you refuse?

*Mr. Kale.*—There are thousands of newspapers spread over the length and breadth of the country who will have to depend on very small dealers, and there will be great complication in the arrangement. Had there been a few importers and users that could have been done.

*Mr. Muir.*—I realise the difficulty. I have thought a good deal about it without coming to any satisfactory conclusion.

*President.*—It is not a simple matter by any means. You say “It is often false economy to use cheap papers of this kind.” I do not know what sort of papers you were thinking of.

*Mr. Muir.*—The paper disintegrates, it takes printing badly and it produces an inferior type of print.

*President.*—On the other hand there is a large amount of printed matter which may with advantage be evanescent!

In answer to Question 139 this is the proposal you make “that a protective duty should be imposed immediately on both paper and pulp simultaneously and that a similar rate of duty on each is desirable.” I do not quite see why the rate of duty should be similar, but I think in the case you are putting forward you are quite entitled to say that it is an essential part of the development of the paper industry in India that the duty on pulp should be adequate to secure development of domestic material. Whether it is a similar rate or not depends upon what is adequate. That is what it comes to. As a matter of fact Mr. Carr told us that it was on the whole cheaper to use wood pulp than to use grass, but that the state of affairs was tending to pass away, and he thought he would increase the consumption of grass and reduce the consumption of wood pulp.

*Mr. Muir.*—That is because mills cannot manufacture better qualities out of grass. We are the only mill in India that can manufacture the best qualities of paper, and on this point the Controller of Stationery will be able to give impartial evidence.

*President.*—Then there is a good deal said in various parts of the representation about the dumping of paper pulp in India below the cost of production. We have asked you to give us copies of invoices and anything you could get from Trade Journals about unremunerative prices. But have you any evidence of what I may call deliberate dumping? Once it is established that protection is in the national interests, then the industry has got to be protected whatever the cause of low prices. To my mind it does not particularly matter why the imported prices are low.

*Mr. Muir.*—What do you mean by evidence of deliberate dumping?

*President.*—You have alluded to the possibility or probability that Germany might start subsidising freight. Deliberate dumping I should call anything done by means of bounties, or by means of subsidies to shipping, or on exports, or, in the case of a country which had its domestic market protected, the systematic unloading of its surplus on foreign markets might be called dumping. But when a manufacturer merely sells his product cheap in order to keep his mill going, I do not call it deliberate dumping.

*Mr. Muir.*—Supposing a mill has its main market in its own country and its production is more than sufficient for the time being for the country's requirements. It pays that mill to get its full output in order to keep its costs low, and it also pays it to sell its surplus production in an outside market at a low price in order to maintain its home market for its main output.

*President.*—That might be deliberate dumping, in the case of a country which has a protective Home market. Otherwise, it is bound to be the normal feature of trade until things begin to get a little better, and as long as this intense competition in all branches of manufacture continues all over the world. In that sense you are dumping to-day in Bombay as you

have got to sell at a lower price there than you get in Calcutta. It is so to speak a normal business process and I do not know how you can help it. Take the case of Tatas. They are selling pig iron in Japan at very low prices and are trying to sell that at still lower prices in the European market. I should personally be willing to protect an industry irrespective of the cause of low prices, provided the various conditions laid down in the Fiscal Commission are satisfied, and it seems likely that eventually the industry can hold its own.

*Mr. Muir.*—I do not know if you will consider this evidence: it is not really any proof: It is a wire from Messrs. Nelson who have deep knowledge on the subject, and they use the word "dumping." I think they allude actually to surplus production.

*President.*—It is only the use of a word. However, I understand what the position is. Turning now to this question of the imposition of the duty on pulp: you say—

"We do not believe in any delay in imposing the duty on pulp, as this would appear to have obvious disadvantages:—

1. It would place the industries which manufacture direct from the raw material at a disadvantage as compared with mills which produce largely from imported pulp.
2. The pulp industry is one which directly develops the country's resources, and any delay in the imposition of the duty on pulp delays development of the country, along with that of the industry.
3. If the duty on pulp be delayed, this country will in the meantime be flooded with imported pulp.

In addition to large supplies which the consumers will probably buy, dealers will stock large quantities and gain for themselves the benefit of these duties which would otherwise go to Government.

4. The industries which largely consume pulp are the older paper mills, which have accumulated large reserves during the years of prosperity. The young industries which are most in need of protection are the ones which require duty on pulp."

Whether or not there is to be protection, how long after that will it be before you will have any surplus pulp to sell or before anyone else can put up a factory?

*Mr. Muir.*—I should think that a concern—I am not talking of the existing factory—could have a bamboo cooking plant ready and start delivering in about six months.

*President.*—One of the bigger mills?

*Mr. Muir.*—Yes.

*President.*—It is probable, is it not, that the bigger mills, in the event of both paper and pulp being protected, would not contemplate purchasing pulp; they would start manufacturing their own pulp?

*Mr. Muir.*—Yes.

*President.*—So that possibly it would only be a few smaller mills that would purchase bamboo pulp. I do not know if there would be any, but I think there might be some.

*Mr. Muir.*—In the meantime, of course, it is always possible that one of the existing paper mills might approach us or any other firm manufacturing pulp to supply their requirements of pulp.

*President.*—They might, but it is not likely.

*Mr. Muir.*—There were negotiations originally when we intended to put up our pulp mill. They did approach us.

*President.*—I do not quite see why you consider it necessary that the duty on pulp should actually take effect simultaneously with the duty on paper, because the buying and selling of pulp is going to be quite a small business as far as the internal consumption of the country is concerned, and therefore not to the interest of the country.

*Mr. Muir.*—As I said, our intention originally was to put up a pulp mill and sell pulp to the local mills.

*President.*—Very likely. But as far as I can judge it does not seem at all likely that things will develop on those lines. Of course, there is one contingency; the attempt of the other mill to manufacture bamboo pulp might fail.

*Mr. Muir.*—They are fairly confident, are not they?

*President.*—The Bengal Paper Mills, I think, will take it up if there is protection. Without protection they say they cannot incur the outlay. How would you recommend a proposal of this kind that the higher duty on pulp should be included in the legislation, but should not become effective until after a certain time?

*Mr. Muir.*—What would you call (a certain time)? Can you give me an idea as to that?

*President.*—A time would have to be fixed after enquiries as to the time that was likely to elapse before pulp could actually be produced. You have not got any to sell at present.

*Mr. Muir.*—We are at a disadvantage because at present we cannot make our pulp in competition with the foreign pulp. Therefore an importer, who imports his pulp and uses it, has an advantage as compared with us until the duty is imposed.

*President.*—The only person who has any advantage is your competitor in India in the manufacture of paper. Why should he be deprived of that advantage until somebody is in a position to supply him with pulp made in India? Why should his cost be raised during the interval before he can use Indian pulp in place of the imported pulp?

*Mr. Muir.*—I would not take any objection if you had said it is a matter of six months between the imposition of duty on paper and the imposition of a duty on pulp.

*President.*—I would rather not mention any specific period. It is rather this, that the time would have to be fixed after enquiries as to the time that was likely to elapse before there was any surplus to sell.

*Mr. Muir.*—Of course, although they might possibly not have their plant fully erected within a very short period, you could be perfectly sure that they would have secured pulp which would last them for a long time.

*President.*—Unless you contemplate that there will be real trade in pulp in India, it does not seem to me that your argument really holds good.

*Mr. Muir.*—I think there will be a trade in pulp but I don't think it will be within a year or so after the imposition of the duty.

*President.*—That is unlikely as far as I can judge. The Couper Paper Mills might conceivably purchase from you because bamboo is too far from Lucknow.

*Mr. Muir.*—We were once in negotiation with the other two mills on our side of India.

*President.*—The evidence of the Bengal Paper Mills was that they would start making their own pulp.

*Mr. Muir.*—I believe the Titaghur people would do the same.

*Mr. Kale.*—I feel that the question of the duty on pulp is an important one and, if it is imposed simultaneously or within six months of the duty on paper, it will mean hurrying up of the mills which have not got a pulp plant, provided they do not buy from somebody else, and consequently an advantage to the country really because it will accelerate the development.

*Mr. Muir.*—Yes.

*Mr. Kale.*—I think your case stands upon two or three things. The first is the suitability of bamboo pulp for the manufacture of superior kinds of paper. You think that this proposition has been established?

*Mr. Muir.*—I can affirm that it has been indisputably. I am confident of that.

*Mr. Kale.*—Secondly, that there are unlimited supplies of bamboo in India, in certain parts of the country to-day.

*Mr. Muir.*—I believe so.

*Mr. Kale.*—But you go further and say it is possible to cultivate bamboo in this country.

*Mr. Muir.*—I believe there are possibilities in that direction.

*Mr. Kale.*—Have you got any evidence of that?

*Mr. Muir.*—Our experiments are in a stage when I cannot give you an answer, I am afraid. We know it can be grown near our mills, but it has to be seen as the result of tests whether it maintains its suitability, as regards structure, and whether it can be grown economically.

*Mr. Kale.*—So it has to be demonstrated yet that bamboo can be grown in parts of the country where it does not grow to-day and that of the required quality?

*Mr. Muir.*—That is so. We hope to extend our experiment very much. If protection is granted we shall be in far better position to extend our experiments in that as well as in other directions.

*Mr. Kale.*—It must depend upon your experiment because there are many parts of the country where bamboo does not grow to-day, and if it can be grown there, it would be very useful for factories that might be located in those parts of the country. Otherwise they will have to purchase bamboo pulp from you and transport it over a long distance. In that case it will not be economical for them to produce paper in competition with others?

*Mr. Muir.*—I believe there are considerable possibilities in the cultivation of bamboo.

*Mr. Kale.*—Would you find it very profitable to manufacture paper out of pulp and sell paper in India or manufacture paper and sell it and at the same time manufacture pulp and sell it? I ask this question for this reason. Many factories which are in existence to-day, or which may be started later on, may say "where is the guarantee that we shall get our raw material in India? We cannot manufacture that pulp ourselves and we have not got raw materials; we want to buy bamboo pulp, but what guarantee is there that we shall get the necessary raw materials in India?"

*Mr. Muir.*—On the other hand, there is the question of the man who has put a pulp manufactory. What is the guarantee that he will be able to sell his pulp? But these difficulties are lessened a great deal if the paper and pulp industries expand in India as a result of protection. That is a part of our trouble. It is a difficult business to put down a plant to manufacture materials for one consumer. At the same time, it is difficult for a consumer to rely for his material on one manufactory, and I think as the industry expands these difficulties will lessen and in the end disappear.

*Mr. Kale.*—You are to-day in the same position in which the Tata Iron and Steel Company were with reference to their claim to protection, because theirs was the only company which was producing steel, as yours is the only company which is producing bamboo pulp.

*Mr. Muir.*—I suppose it is the same with the Tata Company, but I think there are other companies which are in the embryo stage or are half-way developed.

*Mr. Kale.*—I wanted to ascertain whether there are similar possibilities in the case of manufacture of bamboo pulp.

*Mr. Muir.*—I think so.

*Mr. Kale.*—As soon as they found that your experiment was successful and a sufficient assurance was given that if they put up a pulp plant they would be able to produce pulp economically, do you think that they would take it up?

*Mr. Muir.*—I believe so.

*Mr. Kale.*—In the long run you will be able to produce pulp and paper at competitive prices: how long will it take you to be able to do it?

*Mr. Muir.*—In our note we said that we would like protection only to the extent to make India self-supporting. We think it necessary to be assured of protection over a period of, I should say, 10 years. Do you think that unreasonable?

*President.*—I am not prepared to give any answer to that.

*Mr. Kale.*—Do you think that after a period of five years you will be able to do without protection, as some of your disadvantages will disappear and you will be able to reduce your costs?

*Mr. Muir.*—We hope so.

*Mr. Kale.*—You know that in the case of the Tata Iron and Steel Company we have contemplated to begin with, at any rate, 3 years, when they will be able to bring down their cost to some extent.

*Mr. Muir.*—Of course we should have more confidence if we were given protection for a period of ten years, because it would give confidence to our prospective shareholders, and also to ourselves. I take it there is this difference between our position and that of the Tata Company that they have spent their money and we have got much of ours still to spend.

*President.*—Scale for scale, after all, you have had to spend a good deal of extra money on what you have already got. I have no doubt that your firm has the money, but the particular company which has established the works has not.

*Mr. Muir.*—If protection was granted for ten years it would give the prospective shareholders from whom we hope to get our money confidence. Tatas are complete; they do not, I believe, anticipate further capital expenditure?

*President.*—Nothing, except in minor respects.

*Mr. Muir.*—That is the difference. They won't have to raise further money to complete their plant.

*President.*—Three years in the case of Tatas is not parallel to what you now contemplate: We found it impossible to form any estimate how prices might change in three years' time, and in our recommendations we limited to three years not the continuance of protection but the rates of duty proposed. Professor Kale is now raising a different question, that is the period within which you think it probable, or possible, that you could do without protection altogether.

*Mr. Muir.*—I should say 10 years.

*Mr. Kale.*—Don't you think people would regard 10 years as a long period? You want to have the assurance that protection will continue for a long time: but they must have the assurance that their burden will be taken off as soon as possible. There is another objection which is likely to be raised, namely, that, if you raise the price of paper, you are arresting the development of the country because you are making education dearer.

*Mr. Muir.*—I understand it has already been raised. I do not think that the raising of the price of paper, to the extent to which it is proposed, would in any way arrest any development that there is likely to be.

*Mr. Kale.*—What do you think will be the increase in the price of paper that the common people use for books and such other things?

*Mr. Muir.*—I think the increase will probably be less than the proposed duty. If there is a duty already of 15 per cent., the increase amounts to 8·7 per cent., and I think the increase in the price of paper is likely to be less than that.

*President.*—You think prices will not rise to the full extent of the increase in the duty?

*Mr. Muir.*—That is what I think.

*Mr. Kale.*—In view of the probable rise in price to the consumer have you any alternative proposal to make?

*Mr. Muir.*—Do you mean in the nature of a bounty?

*Mr. Kale.*—Or assistance that the Government might give in other ways?

*Mr. Muir.*—Apart from a bounty I do not see what encouragement Government can give.

*Mr. Kale.*—For instance, Government can give concession with regard to rent?

*Mr. Muir.*—We are paying Rs. 10,000 a year. Government might have remitted that for the first seven years, but even that exemption, or total exemption, would not have put us on a paying basis.

*Mr. Kale.*—You have no alternative proposal to make?

*Mr. Muir.*—No.

*Mr. Kale.*—Do you think bounties will do? As you say, yours is a new industry the development of which deserves every help from Government and the public. Do you think a bounty per ton of pulp produced by you will serve your purpose equally well?

*Mr. Muir.*—I would prefer duty to bounty.

*Mr. Kale.*—All along we have been laying stress on the proper development of the natural resources of the country. Factories which utilize bamboo for manufacturing pulp might receive encouragement in the form of a bounty over a period of years. Do you think they will be able in that case to cut down prices within a reasonable number of years?

*Mr. Muir.*—I believe myself that duty will be more satisfactory.

*Mr. Kale.*—Why? After all, your object is to be able to cover the gap. It can be covered in either way?

*President.*—But there is one cover that can be more readily withdrawn than the other!

*Mr. Muir.*—It would be a much more evident expenditure of money if you were receiving a bounty, than if you were protected by a duty. I may be wrong as I have no great experience in the matter, but it does seem to me that Government is human like everyone else, and I think one objection to a bounty is that it is likely to attract criticism and may possibly be withdrawn more readily than protection which perhaps is not so apparent.

*President.*—What you told us in the calculation we made was that the extra duty would raise your price from Rs. 570 to Rs. 620.

*Mr. Muir.*—Yes.

*President.*—On that basis the bounty payable on the total production of 30,000 tons would be 15 lakhs, on 40,000 tons it would be 20 lakhs and so on. It tends to go up. In these days the Finance Department of the Government of India think very hard about 20 lakhs.

*Mr. Kale.*—You think there is a risk of the bounty being discontinued? As regards other ways of help you do not think they will be adequate?

*Mr. Muir.*—No; at least I have not seen anything myself.

*President.*—If it were merely a proposal for raising additional capital to carry you on and get your cost down, would you consider the question of a loan from Government?

*Mr. Muir.*—No.

*Mr. Kale.*—For instance, a loan free of interest? Have you considered the matter? I do not press you to answer the question now, but if you think it is worth while considering, you might let us know.

*President.*—Have you got anything to say about the representation from Messrs. John Dickinson & Co.?

*Mr. Muir.*—No. I think I had better consult Mr. Carr and discuss the matter with him as what we may have to say will be more or less on the same lines.\*

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\* Statement IV.



सत्यमेव जयते

## Witness No. 6.

**Punjab Paper Mills Company, Limited, Lahore.**

## WRITTEN.

*Copy of Representation from the Punjab Paper Mills Company, Limited, dated 23rd April 1924, to the Government of India, Department of Commerce.*

I read a communiqué issued by your Department that paper industry too has been referred by the Government of India to Tariff Board for enquiring as to whether this industry should receive protection or not.

I write to ask you to kindly forward my this representation to the Tariff Board with a view that the paper industry may be protected. My reasons for asking protection are as follows:—

Paper industry has been established in this country for over half a century but it has not made any appreciable progress and more than  $\frac{3}{4}$ th of the quantity of paper consumed in India is still imported in this country. It seems very, very strange that this country, which is perhaps one of the richest places wherein abundant and suitable raw material for paper manufacture can be had, has made so little progress to make herself self-supporting and self-contained. The reason for this, I believe, is not far to seek. The Continental and American countries, which have organized their paper industries to such a high pitch of efficiency and being by financial facilities which are not available in this country, are capable of producing goods in mass quantities and have most of the markets of the world open to them by various facilities both political and economic; they are in a position to dump the markets of India with cheap stuff and thereby undersell the Indian made paper. The result is that not only the present mills do not flourish but there is no inclination on the part of the investing public to put in capital in new schemes however profitable they may be.

I have personal experience of this state of affairs. I have been fortunate in getting very profitable concessions, yet I cannot get the money simply because everybody looks at the results of the existing mills before they look at the new schemes.

In order to help the existing mills to enable them to pay dividend and encourage the new scheme to be matured, a protection of at least 33 per cent. is absolutely necessary.

I consider that it is the duty of the Government to protect this struggling industry, for at least 10 years, to enable it to establish itself in this country. When once this industry is fully established and fully organized, the protective duty can be removed.

To my mind this is the only feasible solution to make India self-contained in the matter of paper supply and to avoid the recurrence of the paper famine that we experienced during the war.

I shall feel obliged if you will kindly send me the questionnaire prepared by the Tariff Board about the protection of paper. If my oral evidence is required, I shall be glad to appear before the Board either before the 10th of May or after October as I intend leaving for England by the middle of next month.



*Statement II.—Replies to questionnaire from the Punjab Paper Mills Company, Limited, dated the 7th June 1924.*

In compliance with your letter No. 377, dated 16th May 1924, we have the honour to send herewith replies to the questionnaire drawn up by the Tariff Board in connection with their enquiry into the paper industry, with five spare copies for necessary action.

The plan referred to in reply to clause No. 17 will follow.

Our Managing Director, Mr. Kashi Ram, who has prepared these replies, has left for England and will be back within the course of the first week of October next. If a day suitable to the Board is fixed on some date in October for his oral evidence and informed of, we will endeavour to meet your wishes in this respect.

## REPLIES TO QUESTIONNAIRE.

### *I. Introductory.*

1. The firm was established on 9th May 1923. It is a Public Registered Company.

2. The Company is still in its very early stage and the Capital so far subscribed is held by Indians. Whatever little establishment there is, it is all Indian.

3. The firm proposes to manufacture Pulp and Paper. Pulp is proposed to be manufactured to the extent to meet our own requirements.

4. The Writer is Initiator and Promoter of the Scheme and controls the affairs.

5. The mill is proposed to be equipped with capacity of 6,000 tons of paper a year.

6. Not in a position to answer at present.

7. The Paper Mill is proposed to be situated near the Headworks of the Western Jumna Canal and the Eastern Jumna Canal, 14 miles from Saharanpur and 20 miles from Jagadhri Railway Station. I know the situation most advantageous in respect of raw material, hydro-electric power, important consuming centres and cheap and abundant labour and facilities for every kind of transport. In my opinion the most important factors in selecting the site of a Paper Mill in India are the nearness of the place to raw material and power or fuel and the abundance and clean supply of water.

8. The various kinds of paper which we propose to manufacture will be white printing, ledger, bonds and superior Badamis, but we consider that the consumption of the white printing and bonds in Lahore and Delhi, the two markets that we intend to capture, will keep our mills more than occupied.

9. The Trade Classifications of paper are:—

1. Calendered, (2) Bleached, (3) Unbleached, (4) Badami and (5) Brown, (6) Bonds, (7) Ledgers, (8) Machine finished, (9) Ivory finished.

The first two and the last four may be considered good, the third one medium, and the remaining inferior. There are so many other varieties of paper that are used in the market, for instance, in case of Badami, a superior Badami which is a very good quality of paper, in case of browns there are superior kinds of browns and there are inferior kinds of brown.

10. In India there is abundance of raw material to manufacture all classes of paper but the industry has not been developed as yet and therefore we do not make the classes of paper that are imported because they cannot stand the competition of the old established, most up-to-date organized and financially strong concerns in Europe. As one of the largest consumers of paper in the Punjab, I know that white printing and writing paper can be sold to any extent, and Sabai grass is one of the finest raw material from which these qualities can be made.

I am not in a position to answer the first part of Question No. 10 because I do not manufacture any kind of paper at present, but from what I know of the paper manufacturers in Western Countries, I can confidently say that one single firm of manufacturers of papers in Western Countries makes more than all the paper manufacturers put together in India. To my mind the reason is not far to seek. Our Government is so generous as to allow other countries to dump their goods without any duty, let or hindrance, these big markets are open to them and having, as mentioned in my representation, an up-to-date organization and financial backing, they can produce one quality of paper *en masse* and thereby reduce the cost of production to the disadvantage and detriment of the Indian manufacturer. If we have the protection against dumping of foreign goods, in course of time our organization will be so completed as to specialise certain kinds of paper and produce them in large quantities and thereby be able to compete with the foreigners even if there was no protection; at present the Indian industry of paper manufacture is absolutely at death's door. If no protection is granted, whatever little industry there is will vanish for all time to come.

11. We propose to manufacture paper by Soda process.

12. We propose to use Naib or Sabai grass.

13. Our usual requirements of this particular raw material would be about 15 to 20 thousand tons a year.

14. Not in a position to answer.

15. Not in a position to answer.

16. I am not at present in a position to say the probable quantity of Naib grass available in India, but I consider the quantity is in abundance. I can, however, find out if statistics are available for the total quantity in India. I know what I have in regard to the raw material and can draw from the south side of the river only two miles away from the proposed paper mill site another 15,000 tons of raw material.

17. A map is herewith sent showing the area and the situation of the forest from which we propose to draw our raw material, the nearest point of which is two miles and the furthest 20 miles.

18. The raw material is cut by hand and collected by coolies and brought by them to the depôts established on the road side from where the motor lorries can bring the raw material to the site of the mill.

19. In my proposed paper mill, we only pay Rs. 1,600 per annum and increase it to the proportion of profits we make above 25 per cent. The Native States have been given fully paid up shares in lieu of the concessions for raw material obtained from them.

20. My estimated cost of cutting and bringing raw material per ton from the jungle to the mill site is about Rs. 14 per ton, but as we haven't worked out the area yet, we cannot exactly give the actual figures, but these estimates have been worked out as accurately as possible.

21. I am enclosing the three agreements concerning raw material entered into between myself and the grantors of the concessions for your information. You will find given therein the terms of concession which I consider most favourable.

22. So far as my knowledge goes I do not find any deterioration in the raw material. This is a self-grown thing and the average rainfall is about 60 inches in that locality. Therefore, I don't anticipate any shortage of crop.

23. I have no actual experience yet, but I am advised if the other qualities of the grass that intergrow with the Sabai grass are weeded out in the beginning of the monsoon season, when it grows, 2—3 years' constant weeding out the foreign grass will help to increase the growth of the Sabai grass.

24. Requires no answer.

25. I am absolutely assured of the sufficient supply of the raw material for all the time and my concessions will show the measures that I have taken in securing it.

26. Sabai grass is one of my raw materials and I am afraid I do not entirely agree with the opinion expressed by Mr. Pearson. I believe that sufficient investigations have not been carried out of the available quantity of raw material in India. The sub-mountainous tracts of the Himalaya contain enormous amount of Sabai grass, a paper mill could be established to make at least 15,000 tons of paper yearly somewhere near Roorkee, Saharanpur and Jagadhri. If the existing mills have to import their raw material from Tehri, Garhwal and Nepal, and if the existing mills have to go to Hoshiangabad, Central India, Sambalpur, Bihar, Orissa and Punjab, it shows a wrong choice of the site by the promoters of those paper mills rather than the lack of sufficient raw material in the country. To my mind the choice of the locality of any concern has a lot to do with the paying or non-paying results of the industry. Paper mills consume very large quantity of coal and raw material, plenty of water and chemicals and if these things are looked into before establishing the industry, I see no reason why that industry should not prosper.

27. The crop of Sabai grass, as mentioned previously, can be increased to a considerable quantity by scientific harvesting and the yield can be got more by strict supervision, at least 50 per cent. of it is wasted by allowing the cattle to graze, the privileged villages to cut for their requirements and by stealing on the part of the non-privileged villages. As the Sabai grass grows on the low ranges of the hills the transport difficulties cannot be so unsurmountable and the cost cannot be so prohibitive as it would be in the case with wood and other raw materials. The paper industry, if protected, has a bright future by utilising bamboo and wood apart from the Sabai grass as raw material. All the Scandinavian paper that comes out to India at the present moment is made of wood and species of the wood have been found in the Himalaya Ranges which are as good for paper producing as Scandinavian wood, but the transport facilities are not yet developed and therefore the cost of the transport of wood from the jungle to the mill site adds to the cost of production of paper to the extent which makes it impossible to compete with Scandinavian paper.

28. I have no experience in this respect.

29. I should think so.

30. I have no experience of Bamboo and therefore cannot think, but I should consider that in northern part of the country the Sabai grass is found more than Bamboo and the accessibility of the supply depends upon the situation of paper mill. The quality of pulp manufactured from bamboo is quite good but not so strong as Sabai grass.

31. I have not yet investigated.

32. Rags are available in large quantity in my province and at reasonable cost. I know they are exported from Punjab to United Provinces paper mills.

33. I have had no difficulty in getting my concessions and I think the Grantors were very kind to me.

34. Not in a position to answer at present.

35. I am not yet in a position to answer, but I hope I shall not have to import any foreign pulp to make paper in our proposed paper mill.

36. We propose to make our own chemicals such as bleach, etc., on the spot.

37. We have no actual experience as the mill is not working at present.

38. Sodium Carbonate, Sodium Sulphide, Caustic Lime, Bleach and China Clay. Practically all the chemicals can be made on the spot except the dyes. I am not in a position to answer the other part of the question as the mills haven't started yet.

39. Not in a position to answer.

### *III. Labour.*

40. About 1,000 men will be required to collect the raw material for four months and the prevailing rate per man there is annas eight a day.

41. I anticipate difficulty in obtaining labour.

42. The labour is indigenous. It is always available in sufficient quantity except at harvesting season which occurs practically at the end of the grass-cutting season.

43. The local labour is generally useful to this sort of work. It can be readily trained if not already used to the work.

44. They require considerable expert supervision involving the employment of skilled labour.

45. Not in a position to answer.

46. Not in a position to answer.

47. As the mill is not working yet, I am not in a position to give answer with regard to mill labour.

### *IV. Power (including fuel).*

53. It is proposed to run the paper mill from electricity.

54. The source of electric power is water. Cost of development of the Hydro-Electric Scheme as estimated at present, will be about Rs. 360 per K. V. T. per annum, and I consider it one of the cheapest developments.

55. In addition I would require a steam boiler when the supply of water is short for three months, adding another 10,000 rupees per year to the cost of power.

56 to 59 are not necessary as I will not use coal.

### *V. Markets.*

60. This can be ascertained from the Government Bureau of Statistics. We have not got figures at the present moment with us.

61. As above.

62. It is very likely, with the increase of education, trade and commerce the consumption of the paper will increase considerably.

63. In Delhi and Lahore. Delhi is about 125 miles and Lahore about 200 miles from the site of the mill.

64. I think Punjab and United Provinces Markets are the places where I can compete more successfully. The consumption of paper in Lahore alone is about 10,000 tons a year and I consider the same quantity at Delhi.

65. I consider that when the paper mill industry is sufficiently developed and is able to meet the demand of Home Markets, the surplus can profitably be exported to countries like Afghanistan, Persia, Malaya States, Mesopotamia, China and other Central Asian countries. Most of these Central Asian countries consume Badami paper. I can make no estimate of the quantities which India might eventually be able to export but they will be considerable.

66. Not in a position to answer.

67. Not in a position to answer at present.

*Pulp.*

68 to 72. Not in a position to answer at present.

*VI. Foreign Competition.*

73. Scandinavia, America and England.

74. It is keener in white printing, Bonds and Ledger.

75. All paper that comes from Scandinavia is, I believe, made from wood-pulp and mostly unbleached, that which comes from England is the finer quality and is made of wood pulp and mixed with rags. The American qualities are the same.

	1913-14.						1917-18.						1921-24.					
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.			
76. M. F., Printing, per lb. at	0	2	6 to 0	3	0		0	10	0 to 0	12	0		0	3	6 to 0	5	0	
Bonds and Ledger, per lb. at	0	4	6 to 0	6	0		4	0	0 to 1	4	0		0	5	0 to 0	6	0	

Second part of the question, not in a position to answer. These prices include c.i.f. and not Custom duty and landing charges also.

77. From the Customs Duty Office and from the invoices of the manufacturers I consider that information is quite enough.

78. I consider that the quotations in the foreign Trade Journal are quite reliable and they represent the prevailing market prices. These quotations show the general market, and when business with foreign Exporter or his Agent is done, it is generally on the prices little below what is quoted in the journal, that business is concluded.

79. I believe the prices now being charged by the Exporters are such that give them no dividend. My reasons for thinking so are as follows:—

*Firstly.*—The prices of everything that is used in the manufacture of paper have nearly doubled and so is the labour, therefore, I believe they cannot afford to sell at the rate they are selling. I am strengthened in my assumption by the reports of the Companies that come out in Trade Journal. In order to keep their mills going on account of the slackness of the markets in Europe due to the political situation there they are now selling paper at sacrifice prices.

80. In Port towns, but it has its effect in Inland towns too.

81. (1) Unsettled political situation in Europe.

(2) General depression of trade and consequent decreased buying power of the people.

(3) Anxiety to keep works going.

(4) The causes do not seem to be temporary, at any rate if the causes were to be removed soon, its effect will last for another year.

82. Have not got the figures.

83. Have not got the figures.

84. Not to my knowledge.

85. (a) Yes.

(b) Yes.

(c) No.

(d) Am not in a position to say definitely, as I do not know the system in Europe, but as I am going there now, I will find out.

(e) Yes.

(f) Yes.

(g) Yes.

(h) Do not know.

(i) Yes.

I shall be able to give detailed information in my oral evidence on my return from Europe, on the above points.

86. Nos. 1, 2, 5, 7 and 9 are permanent. Other causes are removable, some by the Tariff Board and some by the manufacturers themselves.

87. (a) Yes.

A mill that can produce 5,000 tons of paper should be able to pay dividend and anything less than that will add to the cost of manufacture.

88. Yes, very elaborate and complicated machines.

89 to 94. Not in a position to answer yet.

95. None in my knowledge.

96 to 131. Relate to matters that come within the province of paper mills that have been actually working for some time, so I am not in a position to answer.

132. I consider that the conditions laid down in paragraph 97 of the Fiscal Commission Report are fully satisfied in the case of paper industry.

(a) Yes.

(b) Yes.

(c) Not for some years to come.

133. Yes, both the conditions.

134. Yes.

135.

136. On paper and pulp both. If you did not protect pulp industry, foreign capitalists will come with capital, set up paper mills on coast towns, get pulp from Europe feasibly on Subsidized Steamship Companies and undersell the Indian made paper which makes its own pulp. It would be like getting fine thread to make cloth and if we give protection to pulp only, it will be like sending ginned cotton to Manchester and then getting fine cloth from there. We want protection for both pulp and paper of all qualities.

137. By increasing duty against that paper.

138. About 15 per cent.

139. At least 33½ per cent.

140. Foreign cheap paper has not permitted the industry to thrive. It is creditable on the part of the paper mill owners to keep their flag flying even at a loss.

141. None whatsoever.

142. Both are important as I do not consider that paper industry without pulp is either advantageous or desirable in the natural interest. We must protect both.

## Witness No. 7.

## The Carnatic Paper Mills Limited, Madras.

WRITTEN.

*Statement I.—Replies to questionnaire from the Carnatic Paper Mills Limited dated 11th July 1924.*

In reply to your letter No. 450, dated the 7th ultimo, we forward herewith the answers to your questionnaire. But as we have not yet commenced manufacture questions calling for figures and information that could be given only by actual manufacturers have been left unanswered. If you consider it necessary we have no objection to submit our representative for oral examination.

## REPLIES TO QUESTIONNAIRE.

## 1. INTRODUCTORY.

1. The Carnatic Paper Mills Ltd., which I represent, was registered in June 1920. It is a public Registered Company.

2. The entire capital invested in our Company is held by Indians. All the Directors are Indians. The Managing Directors are Indians. There are three foreign experts working in the mill.

3.

4. We have not yet commenced manufacture.

5. The capacity of our mills as at present equipped is for the manufacture of—

(a) Ten tons of pulp from Bamboo, and five tons of pulp from straw per day; and

(b) Five tons of paper of different kinds.

6. Manufacture has not yet been commenced.

7. Our mill is situated in Rajahmundry on the bank of the river Godavari. It is very advantageously situated in respect of—(a) the vicinity to the areas from which our raw materials, viz., bamboos and paddy straw are drawn. Mr. F. Marsden says (*vide* page 40 of his Bulletin on Paper and Paper pulp production in the Madras Presidency):—"Another area which has recently come under discussion lies in the Upper Godavari Division in the Marrigudem, Palusumamudi and Lakkavaram Ranges drained by the Godavari river and its tributaries the Saberi, Sileru and Ginderu. The quantity of *Bambusa Arundinacea* the species common on the West Coast appears to be very small, and *Dendrocalamus Strictus* seems to be the common variety. The available supply in the area is stated to be about 15,000 tons which should ensure a supply to a medium sized factory, the most suitable location for which would appear to be in the neighbourhood of Rajahmundry.

The Districts of Krishna and Godavari are paddy producing districts and the irrigation canals being also navigable, paddy straw can be transported to our mill.

(b) For the present we have to depend for coal from Bengal; but there are prospects of the Talcher Coalfields which are 400 miles from our Mills beginning mining before long. Wood fuel can be brought down by the river Godavari at moderate rates from the extensive forests on both sides of the river Godavari.

(c) Our chief market will be Madras which is 360 miles by railway. We can also export by steamer *viâ* the port of Cocanada. There is a navigable canal connecting Rajahmundry with Cocanada.

(d) Sufficient labour is available at all seasons of the year.

We consider that a perennial supply of water and raw material and the proximity to an engineering workshop to get repairs to machinery promptly attended and the proximity to a railway station for export of manufactured goods are the most important factors in selecting a site of a Paper Mill in India. It is these considerations that have led us to select Rajahmundry as the site of our mill.

9. The principal classifications of paper are Wrappings, Newsprint, white and Coloured Printings, Writings and Ledger Papers, and Speciality Papers.

The kinds of paper we have to manufacture would be classified as Wrappings, Newsprint, Glazed and Writing Papers, Medium and Good.

As far as we are concerned, in view of the raw materials obtainable, we consider the manufacture of white printings and superior lines of paper as most suitable.

10. From our knowledge of the Indian market we consider it will be necessary for us to manufacture a larger variety of papers than what the western manufacturers would do. The reason is that the Indian merchants require a larger variety of all lines and those must be prepared to be supplied to the proportion of each.

The Indian manufacturer is really at a disadvantage in this respect. Because we believe English mills generally concentrate on the manufacture of only one or two lines. Furthermore, the demand in India is for a very large proportion of light white papers which are not made in English Mills.

11. We propose to use Soda process for the manufacture of pulp.

## II. RAW MATERIALS.

12. We propose to use bamboos and paddy straw.

13. We estimate our annual requirements at about 7,000 tons of bamboos and 3,000 tons of paddy straw.

14. Although we have at present no actual working experience we are basing the figures on estimated requirements of  $2\frac{1}{2}$  tons of bamboos or two tons of paddy straw per one ton of unbleached pulp.

In this connection we believe we are correct in stating that this view is supported by Mr. W. Raitt, the Government Cellulose Expert.

Two tons of paddy straw are required for one ton of pulp as per experiments conducted on our behalf by an expert in Switzerland.

15. Our estimate is that one ton of unbleached pulp will be required for producing one ton of paper.

16. So far as bamboos are concerned we refer again to Mr. F. Marsden's Bulletin (*vide* quotation in answering Question No. 7) that the Upper Godavari Division can supply about 15,000 tons of bamboo a year, our requirements being 7,000 tons.

Government experts have expressed the opinion, we believe, that the bamboo forests of India are sufficient to supply the whole world's demand of pulp.

We invite attention to the answer given to question No. 7 about Paddy straw. The supply is very extensive.

17. We shall draw our supply of bamboos from the forests in the Marri-gudem, Palusumamudi and Lakkavareem Ranges in the Upper Godavari Division and also from the Zamindari forests of Bhadrachellam and Polavaram. The forests are situated from 30 to 100 miles, bamboos being floated down the river.

18. *Bamboos*.—The columns are cut by coolies and dragged to the nearest cart track or foot path according to the nature of the country and are drawn



by buffaloes or carted in bullock carts to the bank of the river and floated down in rafts. The transportation on land varies from 5 to 15 miles and by the river from 30 to 100 miles.

*Paddy Straw*.—It will be purchased from cultivators and carted either direct to the mill or carted to the nearest navigable canal and carried in boats to the mill site. The required quantity of straw can be obtained from within a radius of 50 miles.

19. The royalty payable to Government for bamboos of any kind is Rs. 7-4-0 cartload= $\frac{1}{4}$  a ton and private persons levy varying rates—from Rs. 5 to Rs. 10 per cartload according to the distance of their forests to the river.

Straw can be purchased at Rs. 15 per ton from cultivators. The price, however, fluctuates with the character of the season. In years of drought and even in years of short fall of rain prices go up by about 50 per cent. compared with prices in normal years.

20.

21. We have applied to the Government for a concession of reduced seigniorago (Royalty) rate for bamboo and our application is still under consideration.

22. We do not anticipate any difficulty or deterioration in regard to supplies.

25. Once again we invite attention to Mr. Marsden's Report that there is an assured supply of 15,000 tons of bamboo in the Godavari district.

26. We do not propose to use Sabai grass.

27.

28.

29. Undoubtedly.

30. So far as bamboo is concerned we believe that the supply is absolutely assured. We also believe that the yield from bamboo is larger than that from sabai grass.

We have in the Godavari Forests only two species of bamboo, viz., *Dendrocalamus Strictus* and *Bambusa Arundinacea* both of which have been declared by experts to be suitable for pulp.

31. Paddy straw has been experimented and found suitable for the production of pulp. There are some localities in the Madras Presidency where paddy straw is available for manufacture of paper pulp, and it compares favourably with sabai grass in respect to all points mentioned in query No. 30 except perhaps in regard to quality. But the pulp from paddy straw is suitable for newsprints and for inferior kinds of paper for which we estimate there is a demand of 10,000 tons a year in India.

32. We would require only a very limited quantity of rags for preparation of superior kinds of papers and our requirements can be secured from Madras.

34.—It would not be necessary for us to import:—

(a) Primary raw materials.

(b) Foreign pulp.

#### *For Bamboo Pulp.*

36. Our estimated total requirements per year are 7,000 tons of bamboo, 360 tons of soda ash, 1,000 tons of lime, 480 tons of bleaching powder and 6,000 tons of coal, or 15,000 tons of wood fuel.

#### *For Straw Paper.*

Our estimated total requirements are 3,000 tons of straw, 450 tons of limo, 370 tons of bleaching powder and 4,500 tons of coal or 11,250 tons of wood fuel.

38. (a) Soda ash, bleaching powder, dyes and China clay.

China clay will also have to be imported as the experience of the manufacturers is against the use of Indian China clay. If the methods of preparing Indian China clay are improved and if they produce a quality equal to the imported article then only the Indian China clay can supersede the imported article.

(b) Alum and rosin.

(c) We have causticising tanks and we will prepare our own caustic soda from imported soda ash. We have also soda recovering plant.

We are unable to furnish information on these points owing to shortness of time.

39. (a) When our authorised capital is fully subscribed we propose to manufacture soda and bleaching by the process of electrolysis.

Wires and felts may be expected to be manufactured with the industrial development in India and with an assured demand.

(b) *Dyes*.—There does not appear to be any prospects of manufacturing dyes in India.

### III. LABOUR.

40.

41. We do not expect any difficulty in obtaining labour.

42. We can obtain indigenous labour in sufficient quantities.

43. No special training is required.

44. Yes.

47. Imported workmen obtain approximately double the average rate of wages which they would receive in their own countries. We suppose the men sent to this country are probably specialists in their work which should be remembered.

50. We consider we can manage with Indian labour under the supervision of Foreign experts. We can obtain the required labour from the vicinity of our factory.

51. Indian labour undoubtedly improves with training.

52. The factory laws in our Presidency regulate the housing of labour and we would abide by the rules in force.

### IV. POWER.

53. We are providing both kinds of power in our mill *viz.*, steam and electricity.

54. The electric power will be obtained from generators driven partly by steam engines and partly by steam turbines.

55. We expect to use partly wood fuel and partly coal. We have ascertained that our requirements of wood fuel can be obtained from the forests on the banks of the Godavari and we would resort to the use of coal only if the supply of wood-fuel is not constant and regular.

56. We rely on Mr. Raitt's estimate of two tons of Bengal coal or five tons of wood-fuel per ton of pulp and have based our estimates accordingly. One ton of coal or two and a half tons of wood-fuel is the estimated quantity for producing one ton of paper.

57. We have not yet purchased coal. We have purchased wood-fuel however at Rs. 8-8-0 per ton delivered at mill site.

58. No.

59. We have applied to the Government of Madras for concessions for wood-fuel.

### V. MARKET.

60. From our estimated figures we assume the present Indian production 33,000 tons per year.

61. (a) From imported figures for 1922-23 it will be seen that 59,339 tons were imported. Taking the estimated Indian production as per our previous reply No. 60 at 33,000 tons we should say that the estimated total demand for paper of all kinds is approximately 93,000 tons.

	Tons.
(b) Total demand of paper . . . . .	93,000
Newsprints, etc. . . . .	20,000
	<hr/>
Indian Production . . . . .	73,000
For expansion . . . . .	33,000
	<hr/>
	40,000

62. We believe that the demand will substantially increase in the near future. The developments of the country, the spread of free and compulsory elementary education to which many of the provinces in India are committed, the increase in the number of Vernacular newspapers which have an ever increasing circulation, the demand for publications in vernaculars of foreign books in literature and science, will assuredly increase the demand of paper.

63. Our chief market will be Madras about 360 miles from our mill.

64. No.

65. Probably to Australia, New-Zealand and South Africa.

All printing and writing papers.

It is impossible to give an estimate.

68. Yes. Provided a protective duty is imposed.

70. In our opinion it is imported from foreign manufacturers at dump prices thus rendering it impossible for the development of Indian resources on account of manufacturers here being reluctant to lay out the necessary capital for the erection of expensive pulp plant.

We consider that the whole importation of pulp could be replaced by Indian pulp entirely.

71. We estimate the present domestic market in India is the same as the imported figure viz., 1,80,244 cwts. The possible market is practically unlimited as the country develops. The principal market is for sulphide wood pulp, but bamboo pulp from Soda process will we expect be equally if not more acceptable to the paper manufacturers.

72. Export of pulp from India to foreign countries is most probable in a distant future provided industry receives protection.

Australia and New Zealand have no paper industry of their own. We do not consider any estimate can be given as to the quantity or quality when India maintained might be able to export.

#### VI. FOREIGN COMPETITION.

73. As to paper United Kingdom, Norway, Sweden, Holland, Germany and Finland.

The chief pulp competitors are Norway, Sweden and Finland.

74. Competition is keener in White, Printing and Writing papers.

75. From wood-pulp and Esparto grass.

78. We believe Trade Journal quotations are really foreign market prices and not the actual prices at which dumping business is done for this country. Foreign mills manufacture for export at a loss and keep surplus stock off their home markets which maintains full prices in consequence but India suffers as a result.

79. We are credibly informed that the statement given in reply to No. 78 is the opinion of large importers residing in this country.

80. Bombay, Madras, Lahore and Calcutta.

81. We have already replied this in No. 79. We do not see any reason to suppose that these causes are unlikely to continue for some time.

84. No.

85. (a) The cost of plant and machinery is increased to the Indian manufacturer on account of freight, insurance, duty and landing charges which have to be added to the foreign price.

(b) The Expert labour is more expensive in India.

(c) It is necessary to maintain larger number of labour for any specific work and therefore actual cost is not cheaper, and is practically the same as compared with the Western countries.

(d) No.

(e) All auxiliary materials and consumable stores not obtainable in this country have to be paid freight, insurance, duty and landing charges.

(g) Yes, more spare parts have to be maintained on account of their being unobtainable in India.

(h) The present high duty on auxiliary raw materials, at present not manufactured in this country is disadvantageous to the Indian manufacturer.

(i) The Indian capitalists require a larger return than the European investors.

86. (a) Permanent.

(b) Temporary, provided Indian labour can be reduced sufficiently as it becomes increasingly efficient.

(c) Efficiency will improve with training and increased efficiency may mean a reduction in cost and this may therefore be regarded as temporary.

(e) In some cases this may be temporary. For instance in the case of Bleach that will undoubtedly be manufactured when the industry develops.

(g) We imagine if the industry develops sufficiently in this country it could turn out spare parts. In such cases this disadvantage will be temporary.

(h) Customs duty is entirely left with the Government.

(i) With the spread of education and development and protection of industries this disadvantage might disappear in course of time.

## VII. EQUIPMENT.

87. Our mill when fully equipped including preparation of soda and bleach by the process of electrolysis is in our opinion sufficiently large as an economic unit of production to ensure economy. The smallest unit of production in our opinion which can be operated economically under the present day conditions is fifteen tons of finished paper per day.

88. (a) The pulp plant is very expensive both in cost and in maintenance. The machinery is also elaborate.

(b) Paper machinery is elaborate and also expensive.

89. We estimate that nearly two thirds of our authorised capital of Rs. 30,00,000 will be invested in plant and machinery alone.

90. For manufacturing paper from paddy straw machinery supplied by Messrs. Theodore Bell & Co., Kriens, Switzerland.

1. Straw cutter with elevator and duster.
2. Spherical rotary digester.
3. Kollar Gange.
4. Bleaching engine with two wash drums, large size.
5. Special stuff centrifugal pumps.
6. Two beating engines each 400 lbs. capacity with wash drums complete.
7. One paper machine complete of the latest type.
8. One steam engine 45 B. H. P. for the drive of constant part of paper machine and one fine regulating steam engine of 95 B. H. P. for the drive of variable part of paper machine.
9. One automatic cross cutter of the latest type.

10. One automatic bailing press with hydraulic pump complete.
11. One machine calender from Messrs. J. M. Voith, Germany.

For manufacturing pulp from bamboo, machinery supplied by Messrs. Stebbins Engineering and Manufacturing Co., New York, America.

- One Bamboo Crusher.
- One Chipping Machine.
- One Elevator complete with Screens.
- One Digester.
- One Blow Tank.
- One Wash Machine.
- Three Flat Screens.
- One Wood's Thickener Machine.
- Two Bleaching Tanks complete.
- One Washer.
- One Wet Machine Complete.
- Soda Recovery Plant.
- Four Causticizing Tanks with Agitators complete.
- One Bleach mixing tank.

*Soda Recovery Room.*

- Two Evaporators.
- One Incinerator.
- One Ash Conveyor with necessary pumps.
- Two Leach Cells.
- One Lift.
- Complete set of weighing Machines and Scales and hand trucks with rails.
- Four Large storage tanks, capacity 80 tons each, with necessary pumps and connections.

*Power Plant.*

- One Eric City Boiler 250 H. P.
- Nordberg's Engine 200 H. P.
- Three British Niclausse Water Tube Boilers.
- Ruston Tandem non-condensing Engine.
- 450 I. H. P. with shafting complete.
- One Parson's Turbine 800 K. W.
- One Alternator 150 K. W. with Switch pannels and with necessary pumps.
- One Marshall's Portable Engine 25 I. H. P.
- Pumps and Pipes for Pumping Water to the Mill.

91. Yes; provided a protective import duty is levied.

92 We are informed that improvements have been effected in pulp and paper-making process and machinery since the war and we have secured the latest types of machinery and have experts with knowledge up to date.

94. (a) No.

(b) Provided the paper industry is protected sufficient to warrant further capital expenditure which could be required for extension, we would add a paper machinery to manufacture ten tons of paper per day and also equipment for preparing soda and bleach to our existing pulp machinery a list of which is given in answer to No. 90.

95. All ferro concrete tanks, 4 bleach storage tanks and 4 washing tanks are manufactured locally.

### VIII. CAPITAL ACCOUNT.

	Rs.	As.	P.
96. As on 30th June 1923.			
(b) Lands at cost . . . . .	18,135	11	0
(c) Buildings at cost . . . . .	4,42,866	14	6
(d) Plant and machinery at cost:—			
	Rs.	As.	P.
Machinery . . . . .	7,59,450	7	9
Power plant . . . . .	23,460	6	0
Advances paid for machinery.	66,845	4	7
		8,49,765	2 4
(e) Miscellaneous Assets:—		Rs.	As.
Water Works . . . . .	2,450	10	7
Roads . . . . .	323	7	5
Motors . . . . .	3,877	8	0
Books . . . . .	503	3	9
Furniture . . . . .	5,719	9	0
Loose Tools . . . . .	9,685	12	5
Live Stock . . . . .	418	4	0
Bamboo Stock . . . . .	790	1	6
Debtors . . . . .	7,245	0	0
Crockery, etc. . . . .	801	14	9
		31,815	7 5
TOTAL		13,42,553	3 3

97. The figures given above represent the actual cost of the various assets. As we have not yet commenced manufacture nothing has been written off under depreciation.

99. Time available does not permit the answering of this question.

101. (a)

	Rs.	
Authorized Capital . . . . .	30,00,000	} As on 31st May 1924.
Subscribed Capital . . . . .	14,74,180	
Paid up Capital . . . . .	13,95,215	

(b) All our shares are ordinary.

104. (a) The amount of paid up capital—

	Rs.	
in 1920-21 . . . . .	1,09,735	} As on 31st May 1924.
1921-22 . . . . .	5,42,885	
1922-23 . . . . .	11,59,985	
1923-24 . . . . .	13,95,215	

108. Nil.

### IX. COST OF PRODUCTION.

109. We have not yet commenced manufacture.

114. At 7½ per cent. on machinery and at 2½ per cent. on buildings. We consider these rates are suitable.

118. We estimate that we shall immediately require a sum of Rs. 2 lakhs to start manufacture of pulp from bamboo and a sum of Rs. 5 lakhs ultimately to stock raw materials, fuel, auxiliary materials and book debts.

119. We expect that we shall have to borrow capital for working expenses.

120. The amount to be borrowed is estimated at Rs. 5 lakhs at an average rate of interest of 9 per cent. per annum.

124. No.

#### X. MANUFACTURER'S PROFITS.

128. 10 per cent. on Ordinary Shares.

129. If protection is given for a period of at least ten years preference shares at 8 per cent. and debentures at 6½ per cent.

130. 15 per cent.

#### XI. CLAIM FOR PROTECTION.

132. Yes.

A. There is a plentiful supply of raw materials suitable for pulp manufacture and consequently for paper; plentiful supply of labour and large demand for paper, cheap power in the shape of wood fuel.

B. It is certain that the industry will not develop without protection.

C. Yes; because with protection, development will be possible, thereby increasing production and reducing costs.

133. (a) Yes.

(b) Yes.

134. Both pulp and paper industries are important on national grounds and deserve protection apart from economic considerations.

Literacy is very low in India and the spread of education which is recognised to be of national importance will create a great demand for books and the paper industry is therefore one of national importance.

Pulp industry deserves protection from economic considerations, i.e., development and full utilisation of raw materials available extensively in India.

135. Yes; the supply of raw materials over all others is the most important feature rendering the industries suitable for economic conditions. Furthermore the demand for paper gives a good local market.

136. Paper and pulp of all kinds.

137. The tariff valuation should be altered from time to time.

138. Reference is invited to Tariff Schedules.

139. We consider that an import duty of 25 per cent. both on paper and pulp is necessary.

140. The paper industry as far as bamboo is concerned is still in its infancy and so far as paddy straw is concerned it has not yet been attempted anywhere in India and for these reasons protection is necessary.

141. No. From the national point of view the claim for protection of pulp is far more important. If pulp is manufactured, paper will also be manufactured in this country and in times of emergency.

Government Experts are confident that the World's requirements of pulp can be supplied by India. At present however the industry being in the stage of infancy, if protection is given, we are of opinion that the industry will develop itself.

## Witness No. 8.

## The Deccan Paper Mills Company, Limited.

## WRITTEN.

*Statement I.—Replies to questionnaire received from Mr. F. D. Pudumjee on behalf of the Deccan Paper Mills Company, Limited, dated the 21st July 1924.*

The Deccan Paper Mills Company, Limited, was established in the year 1885. I have been asked by the Board of Directors of the Company to represent it before the Tariff Board. I was managing the mills for many years and I am still connected with it. I, therefore, have the honour to make the following representation on their behalf.

## REPLIES TO QUESTIONNAIRE.

## I. INTRODUCTORY.

1. Our firm was established in the year 1885 as a public registered Company with a capital of 5 lakhs. The whole of the capital invested is owned by Indians, the Directors are Indians, and the entire management is in the hands of Indians.

3. Our mill is meant to manufacture paper only, and commenced to manufacture by the end of the year 1887.

5. The full capacity of the mill as at present equipped is about 1,700 tons per year.

6. The actual output of the mill for each year since 1905 is as follows:—

	Tons.
1905-06 . . . . .	691
1906-07 . . . . .	918
1907-08 . . . . .	1,157
1908-09 . . . . .	1,124
1909-10 . . . . .	1,318
1910-11 . . . . .	1,170
1911-12 . . . . .	910
1912-13 . . . . .	1,010
1913-14 . . . . .	1,120
1914-15 . . . . .	825
1915-16 . . . . .	736
1916-17 . . . . .	536
1917-18 . . . . .	501
1918-19 . . . . .	480

7. Our mill is situated at Mundhwa adjoining the Hadapsar Railway Station about 5 miles from Poona, and about 124 miles by rail from Bombay which is our important market, and from where our principle raw materials are drawn.

Considerations which governed the selection of the site were, vicinity to the centres which supplied the principle raw materials, vicinity to an important market, abundant supply of clean water, outlet for the waste water to the adjoining cultivators who paid for it, abundant and cheap labour supply, and vicinity to the G. I. P. Railway. Coal, however, has had to be drawn from the Central Provinces, Hyderabad, Deccan, or Bengal.



8. We manufacture various kinds of paper such as ledger and azure laid, superior and ordinary white writings, and printings, coloured papers, badami printings, white and brown cartridge, and wrappings. The percentage of the total output which each kind represents is given roughly as follows:—

Up to 1913-14.—Azure laid, writing wove, and cream laid 51 per cent.; white printing 31 per cent.; coloured printing 4 per cent.; white cartridge and badami 3 per cent.; brown 11 per cent.

Since 1914.—Azure laid and cream laid 15 per cent.; white printing 34 per cent.; badami printing 39 per cent.; coloured printing 2 per cent.; brown 10 per cent.

9. The principle trade classifications of paper may be given as:—Hand-made and ledger papers, writing and bond paper, printing paper, badami paper, wrapping and packing paper, news printing paper, blotting paper, tissue paper, etc. In view of the raw materials obtainable in India and the Indian demand, we should say that the classes of paper for which the conditions are most favourable are ledger, superior and ordinary writing and printing papers, and wrapping papers.

10. We manufacture a larger variety of paper than a single manufacturer in Western countries commonly does because the prevailing conditions do not lend themselves to the economic manufacture of a standard grade of news printings, and the market for the better grades demands a large amount of specialization. In having to make different grades and specialities we are at a disadvantage inasmuch as the constant change-over from one quality to another entails a certain loss of materials, restricts production, involves a large percentage of "Broke and Retree," and the product cannot be expected to come up quite to the standard of those who have specialized in their own particular line. Further, it necessitates the handling of large stocks of various kinds of raw materials and large stocks of various kinds of finished papers.

## II. RAW MATERIALS.

12. Our primary raw materials are rags, gunny, waste paper and imported chemical pulp. For the output of about 1,100 tons the annual requirements of the primary raw materials are as follows depending upon the quality and kinds of paper made during the year:—

Rags 600 to 1,000 tons.

Imported pulp 400 to 700 tons.

Gunny, humps.

Old ropes, and Manilla, etc., 70 to 100 tons.

Waste paper 90 to 100 tons.

For an output equivalent to the full capacity of the mill the requirements would have been:—

Rags 900 to 1,600 tons.

Pulp 600 to 1,100 tons.

Gunny, etc., 100 to 150 tons.

Waste paper 130 to 150 tons.

14. The rags are of a quality which after sorting, dusting and cutting, yields on the average 60 per cent. of bleached paper. The waste in sorting, dusting and cutting amounts to 12 per cent. to 18 per cent. depending upon the quality. On the average, therefore, 1 ton of rags produces  $\frac{1}{2}$  a ton of white paper.

The yield on gunny is about 60 per cent. of brown paper.

16. If the area of collection is slightly extended, more than 2,000 tons of rags can be collected in this province.

17. The greater part of the rags used by us is collected in Bombay and supplied to us by our Contractor. It is carried from Bombay to our mill by rails, a distance of about 124 miles.

20. In 1913-14 the cost of rags was Rs. 40 to Rs. 90 per ton f.o.r. Bombay, and freight from Bombay to our mill amounted to Rs. 5 to Rs. 6 per ton (at wagon rates).

During the war there was no material difference in the price, but the quantity purchased was larger, and the rags were of much poorer quality. The railway freight, however, since the war has been increased and amounts to Rs. 8 to Rs. 9 per ton (at wagon rates).

The cost of white shavings in 1913 was Rs. 60 per ton f.o.r. Bombay.

22. The quality of rags has deteriorated since the war, but it is to be expected that when normal conditions are restored there will be an improvement both in the quality and quantity available in Bombay, side by side with the improvement in the condition of the working and the poorer classes.

24. We import chemical pulp to supplement the domestic supplies and to impart certain qualities to the finished paper which cannot be obtained by the use of the domestic supplies alone.

The cost of imported chemical pulp is as follows:—

During 1913-14—

Bleached sulphite pulp . . . . .	£13-16 c.i.f. Bombay.
Bleached soda . . . . .	£13- 2   "   "
Unbleached sulphite . . . . .	£10-10   "   "

The country of importation Norway and Sweden.

Loading, clearing charges . . . . .	Rs. 5 per ton.
Railway freight to the mill . . . . .	Rs. 2-13 (at wagon rate).
Custom duty . . . . .	Nil.

### III. AUXILIARY RAW MATERIALS.

36. The chief auxiliary raw materials are, caustic soda, bleaching powder, sulphate of alumina, rosin, china clay, French chalk, ochres, and such consumable stores as wires, felts, jackets, knives, beater bars, belting, lubricants, etc.

37. The total requirements per year, and per ton of finished paper are as follows:—

Total requirements per year, average tons, about	Per cent. consumption.
Caustic soda . . . . . 18	3 to 5% of rags used.
Bleaching powder . . . . . 23	4   "   5%   "   "
Alumina Sulphate . . . . . 29	2½   "   3% of paper.
Rosin . . . . . 26	2   "   3%   "
China clay . . . . . 47	} 8 to 10% of finished paper.
French chalk . . . . . 45	
Ochre . . . . . 15	

As to the consumable stores, viz., wires, wet and dry felts, and couch jackets, the pre-war cost amounts to about Rs. 4 to Rs. 6 per ton of paper.

38. Of the chief auxiliary raw materials the following have been imported from abroad:—

Caustic, Bleach, Alumina Sulphate, and China clay.

And the following produced and purchased in India:—

Rosin, French chalk and Ochres.

The pre-war prices are as follows:—

	Country of origin.	CIFCI prices.	Cleaning charges.	Rail Freight to mill.	Custom duty.
Caustic . . . . .	English . . . . .	£13-6	Rs. 5 per ton.	Rs. 10 per ton.	5%
Bleach . . . . .	Do. . . . .	£8-16	Do.	Do.	„
Al. Sulphate . . . . .	Do. . . . .	£5-8	Do.	„ 7-3 per ton.	„
Rosin (American through England) . . . . .	England) . . . . .	£18-9	Do.	Do.	„
China clay . . . . .	English . . . . .	£3-10	Do.	Do.	„
French chalk . . . . .	Do. . . . .	£1-10	Do.	Do.	„

The present prices are:—

	Origin.	Price F. O. R. Bombay.	Rail freight to the mills.
Caustic . . . . .	English	Rs. 430 per ton . . . . .	Rs. 9-3-0 per ton.
Bleach . . . . .	Do. . . . .	„ 320 „ „ . . . . .	„ Do.
Al. Sulphate . . . . .	Do. . . . .	„ 200 „ „ . . . . .	„ 8-9-0 „ „
China clay . . . . .	Do. . . . .	„ 125 „ „ . . . . .	„ Do.
Rosin . . . . .	Indian . . . . .	„ 265 „ „ . . . . .	„ Do.
French chalk . . . . .	Do. . . . .	„ 95 „ „ . . . . .	„ Do.
Ochres . . . . .	Do. . . . .	„ 60 „ „ . . . . .	„ Do.

39. Caustic soda and bleach, if the consumption is fairly large, can now be very economically manufactured by the paper mills themselves by electrolysis, provided an up-to-date power plant, as a suction gas or a Diesel motor, is installed.

Sulphate of Alumina can be made in India, thus utilizing large quantities of Bauxite or Cryolite available in India, and as a matter of fact samples have been already sent to us by a chemical firm in Bombay.

China clay is available in India, but the material so far offered to us is lacking in the plastic qualities and fineness which are found in the English China clays. It is to be expected however that, if the demand increases, the quality can be considerably improved to first meet the requirements of the paper-makers, by the introduction, for example, of the English methods of washing and levigation and then gradually reach the standard required by the cotton mills.

Rosin is produced by the Government factories in Punjab and has been found to be quite satisfactory for paper-making.

French chalk is produced in India in several grades. The first grade is especially fine and white, is cheaper than the foreign product, is even cheaper than the imported China clays, and is quite suitable for paper-making.

Ochres, both red and yellow, are available in India and are used in large quantities by the Indian mills and are cheaper than the corresponding foreign product.

Machine wires, steel knives and bars, woollen and cotton felts are at present not manufactured in India. We may say, however, that a woollen "wet"-felt was made by one of the Cawnpore mills for us during the war. The texture and quality seemed to be quite satisfactory, but the felt was not woven seamless or endless, and therefore it could not be worked through the press rolls without creasing at the joint. Cotton dry-felts were used during the war, made by the Bombay carpet or durree weavers, who were able to weave the ends together by an ingenious method which proved quite satisfactory in practical use.

#### *Mill Labour.*

41. The process of paper manufacture requires much expert supervision and skilled labour, but no imported or European labourer or supervisor has for long since been employed in our mills. In course of time, with careful training, Indian labour has acquired sufficient skill to replace efficiently all imported workmen in our mill.

48. The total number of workmen employed were in 1913-14, 278.

49. The total wages bill for the year 1913-14 was Rs. 34,470.

The average wages for man in different classes have been as follows:—

Paper machine operators Rs. 0-12-6 to Rs. 0-7-6 per day.

Beater machine operators Rs. 0-9-6 to Rs. 0-7-0 per day.

Rag boiler operators Rs. 0-7-6 to Rs. 0-6-6 per day.

Rag chopper operators Rs. 0-7-6 to Rs. 0-6-6 per day.

Ordinary factory hands Rs. 0-5-6 per day.

In 1918-19 the average wages for man in different classes has been:—

Paper machine operators Rs. 1-0-0 to Rs. 0-13-0 per day.

Beater machine operators Rs. 0-13-0 to Rs. 0-11-0 per day.

Rag boiler operators Rs. 0-12-0 to Rs. 0-10-0 per day.

Rag chopper operators Rs. 0-12-0 to Rs. 0-10-0 per day.

Ordinary factory hands Rs. 0-8-0 per day.

The increase in the rates of wages has been gradual.

50. The whole of the labour required by us is drawn from the vicinity of the mill, and is sufficient. Chawls are provided for the workmen in our mill compound.

51. The Indian labourer is found to improve considerably with training. He soon gets used to any new work he is put to, and if he is given the opportunity, in course of time, he acquires sufficient skill to efficiently manage any particular machine, or process of manufacture, on which he is employed. But principally for want of primary education he is not expected to work with that intelligent understanding which is the characteristic of the Western workman, and for want of stamina his efficiency is lower, say in the proportion 2; 1 at least.

#### *Power.*

53. The power is derived from steam, the fuel being coal.

56. The total consumption of coal amount to 3·4 tons per ton of paper produced in 1913-14.

Coal is obtained from the Central Provinces and Bengal.

57. In 1913-14 Bengal coal was used and cost Rs. 5-8-0 to Rs. 6-0-0 per ton at the Pits *plus* Rs. 11-1-0 railway freight to the Hadapsar station adjoining our mills, and the cartage to the mills about Rs. 0-4-0 per ton.

Since the war, Central Provinces coal costs Rs. 13-0-0 per ton pitmouth and railway freight Rs. 9-7-0 per ton to our mills. Bengal coal cost Rs. 11-8-0 per ton pitmouth and Rs. 16-13-0 rail freight to our mills.

#### *Market for Paper.*

60. The local Indian production of paper amounted to about 25,000 tons in normal times. During 1921 it had risen to about 32,000 tons.

The total Indian demand may be put down at 75,000 to 80,000 tons. It is possible that about 90 per cent. of the total demand can be made in India.

62. The consumption of paper in India is bound to expand rapidly in response to the growth of education. The fact stands that the average consumption of paper per head of the population in India is not one-sixteenth that obtained in any country in Europe and it strongly indicates how far an increase in the consumption is possible.

63. Our principle market for paper is Bombay which is about 124 miles by rail from our mills.

64. The Southern markets offer an advantage to us over the foreign importers inasmuch as the saving in freight from Bombay to Poona amounting at present to Rs. 9-3-0 per ton is in our favour. But their demand is limited to small quantities, and is for various kinds of paper.

66. Almost the bulk of the paper made in our mills since we commenced work up to 31st March 1924 was purchased by the Bombay Government.

The prices paid during the pre-war period were as follows:—

	Per lb.	
	Rs. A. P.	
Brown paper . . . . .	0 1 10	} <i>plus 55 per cent.</i>
White printing . . . . .	0 2 4½	
Cream laid . . . . .	0 2 7	
Cream laid special . . . . .	0 3 5	
Half bleached . . . . .	0 2 4½	

During 1918 to 1924 the prices paid were as follows:—

	1918 to 1921 per lb.	
	Rs. A. P.	
Brown paper . . . . .	0 3 8	
Badami . . . . .	0 4 11½	
White printing . . . . .	0 5 5½	
Cream laid . . . . .	0 5 11½	

During 1921-24 the prices paid for brown badami were the same, but for white printing and laid were 20 per cent. higher.

The prices received by us from the Government during the war were by no means the market prices then prevailing.

We were paid only 53 per cent. above the pre-war rates, whereas the market prices in several instances were more than 300 per cent. of the pre-war prices.

67. The paper manufactured by us is not consumed by newspapers, as our mill is not laid out for the economical manufacture of this kind of paper.

#### *Foreign Competition.*

73. The foreign countries from which competition in the Indian market is keenest are Scandinavia, Finland, Germany and Austria. The raw material used by them is principally chemical and mechanical pulp.

74. The competition is keenest in brown and wrappings, mechanical printings, and printing and writing papers which are not free from mechanical wood pulp.

76. The prices at which imported paper has entered the country are as follows:—

	1912 cifci.	1913 cifci.	1914 cifci.	Duty Charges.
White printing .	1½d. to 2½ per lb.	1½d. to 2½ per lb.	1½d. to 2½ per lb.	5% Rs. 6 per ton.
Cream laid English.	2½d. per lb.	2½d. per lb.	2½ to 2½d. per lb.	5% Rs. 6 per ton.
Brown . .	10s. per cwt.	10½s. per cwt.	...	5% Rs. 6 per ton.
News printing .	1½d. per lb.	1½d. per lb.	1½d. per lb.	5% Rs. 6 per ton.

	1921.	1922.	1923.	Duty.	Charges.
White Printing .	7½d. per lb.	3½ to 3½d. per lb.	3½ to 3½d. per lb.	7½ ples per lb.	About Rs. 8 per ton.
Cream laid English.	5½d. per lb.	4½d. per lb.	4½d. per lb.	8½ ples per lb.	About Rs. 8 per ton.
Brown . .	..	2½d. per lb.	1½d. per lb.	1½d. per lb.	About Rs. 8 per ton.

We also give below the pre-war prices and those current in England during 1922 and 1923 as gathered from the paper trade journals.

	Pre-war d. per lb.	1922. d. per lb.	1923. d. per lb.
News printing . . .	1½	2½	2½
Common printing . . .	1½	3	2½
Second „ . . .	1½	3½	3
Fine „ . . .	2	4½	3½
Esparto „ . . .	2½	4½	3½
Writing (containing mechanical pulp).	1½	3½	3
Writing seconds . . .	2	3½	3½
„ fine . . .	2½	4½	3½
„ Esparto . . .	2½	5	4½

78. The quotation in the trade journals are a fair indication of the prices obtained in England, but without the corresponding samples they are of little value for business transactions.

The Indian paper trade is more or less based on the prices quoted on samples by the large importing firms.

79. We have every reason to suppose that the prices at which foreign producers sell for export to India are unremunerative. Owing to the general slump in the world's trade the British manufacturers are offering paper in the Indian market at prices which they openly assert are below cost. The position in England is to some extent reflected in the closing down of several mills, and in the reduction of the output of others. We quote the following passages from the British paper trade journals. "Papermakers, in every country appear to be in the same difficulty as that with which British manufacturers are concerned, namely, the problem of obtaining adequate prices for their paper. In many quarters the same complaint is made that costs of production exceed the prices at which papers can be sold, and it is quite remarkable to find such unanimity from every paper producing country on this point. British papermakers have for a long time asserted that they had been selling below cost of productions and unless prices are improved they must continue to do so." ("Paper Trade Review," 25th May 1923.)

"As for paper trade, 1923 was a bad year almost from every point of view. The makers of wrappings have had the worst time . . . . Printings and especially news print mills have been fairly busy, but at unremunerative prices . . . . The English, Scotch, and Irish papermakers are . . . . unanimous in pointing out that the stumbling block in the way of the real prosperity of the trade is the ease with which the foreign paper is dumped into the country." ("Paper-making and Paper-selling," January 1924.)

"The year 1923, like its immediate predecessor, has been a period of hope deferred and anticipation disappointed. The dislocation of international commerce, brought about by four and-a-half years of warfare, is far from being remedied after 5 years of peace, and indeed, the condition of Mid-European countries, so far from improving has grown even worse during the last twelve months. Opinions differ as to the wisdom displayed by the French Government in occupying the Ruhr Territory, and it is not within the province of a trade journal to discuss questions of high politics; but the immediate sequel of that operation was undoubtedly evident in the rapid depreciation of German currency. During the year the German Mark has placed itself on a level with the Russian Rouble, both currencies alike having vanished from the sphere of tangible values. The immediate result of this . . . . the export from Germany of those manufactured articles

tion of depreciated currencies would mean a great advance towards healthier business conditions here, and this is the only remedy for paper trade depression." ("Paper Trade Review," 4th January 1924.)

81. It will be seen, therefore, that the general depression in the trade throughout the world, and the advantage taken in their depreciated currencies by large paper-making countries like Germany and Finland, are the principal reasons why foreign paper is dumped into an unprotected country like India. It stands to reason to believe, therefore, that this state of affairs must continue for a long time, and that until the complications created by the depreciated currency of one of the largest industrial countries is solved, and a healthier tone is restored to the world's commerce, prices of both raw and finished materials cannot reach on economic basis anywhere, and much less in India.

85. (a) As compared with the foreign manufacturers the Indian manufacturer is at a disadvantage as to the cost of plant and machinery inasmuch as he has to pay an additional freight to cover the distance from Europe to India, the railway freight from the port to the mill site, if the mill is situated at a distance from the landing port, the cartage, and the duty amounting to  $2\frac{1}{2}$  per cent. of the value of the machinery. The sea freight, including insurance, on a paper machine weighing over 140 tons at present amounts to approximately 5 per cent. of the price. Further, the cost of erection of machinery and plant will be higher in India if it is necessary to import expert labour. We do not think that the cost of erection need be appreciably higher, as it is not absolutely necessary to import expert labour for the purpose of erection. Paper machinery and plant have been successfully erected in India entirely by Indians. In this connection the skill and experience gained by the existing Indian mills is to their advantage, and if these mills contemplate an extension, or think of putting up new mills, it will not be necessary for them to import foreign labour for the purpose of erection.

(b) As to the cost of expert labour for working the mills, we do not think it is necessary in every case to import foreign labour. However, in a large mill working several machines at a time, it would be expedient to import one really good beaterman, and one machine-man to look after all the paper machines in the mill, and their cost divided over a large production would not be appreciable.

(c) As to the efficiency of ordinary labour the Indian paper-maker is at first at a great disadvantage. Unlike cotton-mill labour, skilled labour for paper-making is difficult to get at the start. Foremen and workmen have to be trained up at the mill itself. But the disadvantage is not permanent. Given adequate facilities for training, the Indian workman is not long in gaining the required skill, and we have the example of paper mills in India worked entirely by Indian labour. After the labour is trained in the skilled work so essential in a paper mill, the cost of labour, as we shall show later on, is to the Indian manufacturer's advantage.

(d) As to the collection and transport of the primary raw materials, if the mill is so located, that the distances over which the raw materials have to be transported are great, as in the case in India in several instances, the Indian manufacturer is at a very great disadvantage, particularly as adequate transport facilities, and railway concessions are not obtained in India. The collection of the primary raw materials is also a great drawback because the paper-maker already burdened with the heavy duties imposed upon him in the paper-making proper, has got to create, organize, and maintain another industry, which is an industry in itself, that of the systematic cropping, collection, and transport of considerable quantities of raw material. But if the paper mills are divorced of the pulp mills, as is the practice in force in Europe, that is to say, if the paper-maker is not his own pulp maker as is now the case in India, the transport of raw materials presents no more difficulties, or disadvantages, to the Indian manufacturer than is now the practice in Europe and America. Because, it is then possible for the paper-maker to select a site near one or other of the large paper consuming



centres, which would satisfy all the most important conditions necessary for successful working—such, for example, as rail communication, and sea or tide water locations easy of access to the great markets of the world affording transport facilities for auxiliary raw materials and for pulp either Indian or foreign, accessibility to great consuming markets, cheap coal and intelligent labour.

(c) As the cost of the auxiliary raw materials and consumable stores, considerations such as ocean freight, duty and landing charges, capital locked up in the stock, and deterioration, are to the disadvantage of the Indian manufacturer. This is particularly so in the case of imported Caustic and Bleach. The latter rapidly deteriorates on keeping, and even when freshly received is scarcely found to test 26 per cent. chlorine contents as against 37 per cent. when sent out. In our opinion, no paper mill which makes its own pulp, or pulp mill, can thrive well in India that does not produce its own bleach and caustic by electrolysis, particularly as the plant required is not so complicated that it cannot be efficiently managed by Indians. With a suitable power-plant it is possible to make bath, caustic and bleach, at a cost less than even what several of the Western mills are now paying for the ready-made product.

As to other auxiliary raw materials, such as rosin, fillers, ochres, lime, these can be obtained in India at advantageous prices. Sulphate of Alumina, however, has to be imported in quantities amounting to about 2 to 3 per cent. of the paper made until the demand is sufficient to warrant its manufacture in India.

As to consumable stores such as wires, felts, jackets, beater-bars, knives, etc., the Indian paper maker is at a disadvantage. The cost per ton of paper amounted to Rs. 8 per ton in 1913-14.

(f) As to freight on finished goods the Indian mills are at a disadvantage when the principle market is at a greater distance from the mills than it is from the importing sea port, and railways concessions are not obtainable. For instance, to carry finished paper from our mills to Bombay over a distance of about 124 miles it costs Rs. 9-3-0 per ton, and railway rates for small consignment are the same as for wagon loads, at the present time.

(g) As to the maintenance of stocks of spare parts the Indian manufacturer is at a disadvantage. But with a well appointed mechanic shop, which the Indian mills usually have, it is not necessary to keep many more parts in spare than is necessary in the European mills.

(h) As to custom duty on the imported materials this is a serious item placing the Indian manufacturers at a great disadvantage. The duty amounts to 15 per cent. on all imported auxiliary raw materials and consumable stores.

(i) The raising of capital is the greatest disadvantage the Indian manufacturer has to contend with. While there is no lack of capital with those who have at heart the welfare of the country and its industries, the limited success obtained by the existing paper mills has destroyed all confidence in the investing public. India is still in the early stages of industrial development, and under the circumstances, so long as the industry has to face unprotected the unrestricted competition of the world's paper trade, it is impossible to induce the Indian public to put more money in this industry.

#### *Equipment.*

87. Our mill is by no means sufficiently large as an economic unit of production. If we take into account only the book-paper manufacturers of America, the total production of their 39 principle mills amounted to 575,804 tons (of 2,240 lbs.) in the year 1915 (Witham, "Modern Pulp and Paper-making"), or 14,760 tons per annum per mill. At least half of this or rather 8,000 to 10,000 tons per annum represents the minimum for economic unit of production, so as to compete successfully with the foreign manufacturers.

88. Both the manufacturer of pulp and paper requires the use of elaborate and expensive machinery. But pulpmaking being more a chemical than a mechanical process, more elaborate machinery is required for paper than for pulp, particularly as the latter is the crude product used by the papermaker for the manufacture of the finished material whose fineness and quality are entirely different.

Our capital amounts to Rs. 5,00,000. But the total cost of machinery, plant, land, buildings and erection amounted to Rs. 5,88,290. We were, therefore, obliged to work with borrowed capital.

The following is a brief description of our plant and machinery:—

- 1 Rag duster.
- 2 Rag choppers.
- 1 Willow.
- 4 Spherical rag boilers 9' diameter.
- 10 Washing and beating engines, Hollander Type, 450 lbs. each.
- 4 Flat strainers.
- 1 Paper machine, 100 inches wide, 35 feet long, 2 suction boxes, 2 wet presses . . . . . Drying cylinders, 4 feet diameter. Smoothing rolls damping and colling rolls, and 2 stacks of calendars, 5 rolls each, fixed speed steam engine to drive the machine and pumps. (The machine is not provided with a variable sectional drive.)
- 1 Revolving slitting and cutting machine.
- 2 Guillotines.
- 2 Plate glazing calendars.

The preparatory machinery was supplied by Messrs. Bantley and Jackson of Bury, Manchester, and the paper machine by J. & W. Bertrams of Edinburgh in the year 1885.

The power plant consists of—

- 4 Lancashire boilers 28' x 1' 6" 100 lbs. pressure by Beely.
- 1 Green Economiser.
- 1 Compound condensing tandem steam engine, 450 I.H.P., by Douglas and Grant, Kirkcaldy.

The machinery was put to use in the year 1887.

91. Our machinery and equipment are by no means up-to-date to enable us to successfully compete against the foreign manufacturers.

92. No epoch-making improvements have been effected in pulp and paper-making machinery during and since war, that we are aware of. But it is fact that many improvements have been effected in constructional details, as for example in the suspension, etc., of the wire part, in couch doctors, in the lay out of the couch and wet presses, in details regarding the suction-roll, in the drive of the variable parts of the paper machine particularly with regard to electric sectional drive, in the exhausting appliances of the drying cylinders, in the shape and proportion of the beating engines and refiners, etc.

With regard to pulpmaking processes, however, the recently developed chlorination process deserves the utmost attention of the Indian pulpmaker, as the process is particularly suited to Indian conditions, involving, as it does, the manufacture of chlorine and caustic on the spot, and dispensing altogether with the evaporating and soda recovery plant.

93. We have since 1914 adopted no new process of manufacture, or installed any new plant or machinery.

94. We contemplate the replacement of our existing power-plant with either a suction gas plant or a Diesel oil engine and the replacement of our brass and iron press rolls with stone and rubber rolls. and to bring a new

and a larger stack of calendars, and, if possible, to instal on entirely new and modern paper machine. But since our mill has closed working since April this year, we anticipate opposition to the scheme, because, owing to the bad state of the paper industry in India, questions have been raised whether it would not be in the interest of the shareholders to stop work altogether, since, with the money realised by the sale of the mill and with the existing reserve and depreciation funds a fairly satisfactory return per share is anticipated.

No parts of the machinery are made in India. But it is possible with the help of our own mechanic shop, and the local engineering firms to keep all machinery in proper order, and to replace broken or damaged parts if any.

#### *Capital Account.*

96. The block value of our property, as at 31st March 1923, is as follows (round figures):—

	Rs.	Rs.
(a) Leases and concessions . . . . .	Nil.	
(b) Land at cost price . . . . .	4,643	
(c) Mill building, etc., at cost price . . . . .		2,29,757
Less depreciation up to 1923 . . . . .		76,929
		<hr/> 1,52,828
	Rs.	Rs.
(d) Machinery and plant at cost price . . . . .	3,37,758	
Less depreciation up to 1923 . . . . .	1,38,186	
	<hr/>	<hr/> 1,99,592
(e) Dead stock:		
Office and mill furniture . . . . .	1,203	
		<hr/>

98. During the 35 years since manufacturing commenced the sum set aside for depreciation on the buildings is Rs. 76,927, and on the machinery and plant Rs. 1,36,166 which works out as follows:—

Depreciation on buildings 0.9 per cent. per annum.

Depreciation on machinery and plant 1.16 per cent. per annum.

Whereas the depreciation should be

on buildings 5 per cent.

on machinery and plant 7½ per cent.

99. For a mill having the same output as our mill the present cost of "Buildings" would be about 60 per cent. more and machinery and plant about 75 per cent. more than the cost of our present mill. But it would be an elaborate paper machine embodying the latest developments, and the operating cost of the mill would be smaller than ours.

101. The capital of the Company is as follows:—

	Rs.
Authorized . . . . .	5,00,000
Subscribed . . . . .	5,00,000
Paid-up capital . . . . .	4,99,135

The capital is divided in 1,000 ordinary shares of Rs. 500 each.

The dividend paid each year since the establishment of the Company is as follows :—

	Per cent.
1885-86 . . . . .	<i>Nil.</i>
1886-87 . . . . .	<i>Nil.</i>
1887-88 . . . . .	<i>Nil.</i>
1888-89 . . . . .	<i>Nil.</i>
1889-90 . . . . .	4
1890-91 . . . . .	5
1891-92 . . . . .	5
1892-93 . . . . .	5
1893-94 . . . . .	5
1894-95 . . . . .	5
1895-96 . . . . .	5
1896-97 . . . . .	5
1897-98 . . . . .	5
1898-99 . . . . .	5
1899-1900 . . . . .	5
1900-01 . . . . .	5
1901-02 . . . . .	5
1902-03 . . . . .	5
1903-04 . . . . .	5
1904-05 . . . . .	5
1905-06 . . . . .	5
1906-07 . . . . .	5
1907-08 . . . . .	5
1908-09 . . . . .	5
1909-10 . . . . .	6
1910-11 . . . . .	6
1911-12 . . . . .	6
1912-13 . . . . .	6
1913-14 . . . . .	6
1914-15 . . . . .	6
1915-16 . . . . .	6
1916-17 . . . . .	6
1917-18 . . . . .	6
1918-19 . . . . .	7½
1919-20 . . . . .	8
1920-21 . . . . .	8
1921-22 . . . . .	8
1922-23 . . . . .	9

Since 1st April 1919 the mill has been let out to Messrs. D. Pudumjee & Co., and the dividends have been paid from the lease-rent received from them. They, however, inform us that they cannot work the mill at a profit, so much so that they have thought it fit to close the mill since 1st April this year. They will hand over the mill to us on 1st April 1925 when their lease expires, and will not exercise their option of continuing it for one year more.

105. The average rate of dividend on the ordinary shares for the full period since the mill commenced manufacturing amounts to 5·4 per cent.

107. The amount of the reserve fund created by the Company is—

	Rs.
Reserve Fund . . . . .	64,941
Provision for bad and doubtful debts . . . . .	28,175
<b>TOTAL</b>	<b>93,116</b>

The amount has been accumulated from surplus profits.

108. An additional capital of at least Rs. 3,00,000 will be necessary to carry out our contemplated scheme of extension and replacement, viz., a new power-plant, a new paper-machine and various other replacements.

#### COST OF PRODUCTION.

##### *Works cost.*

109. The following statement shows the total expenditure (in round figures) incurred on the production of paper during 1913-14:—

	1913-14. Rs.
(1) Primary raw materials . . . . .	51,205
(2) Purchased pulp . . . . .	1,47,023
(3) Auxiliary raw materials . . . . .	37,854
(4) Mill labour . . . . .	34,470
(5) Power and fuel . . . . .	66,450
(6) Ordinary current repairs and maintenance of building and plant and machinery (including Engineer's Stores) . . . . .	17,980
(7) General services, supervision and local office charges (including Manager's and Engineer's pay) . . . . .	15,617
(8) Miscellaneous* . . . . .	19,200
<b>TOTAL</b>	<b>3,80,801</b>

	Tons.
Total production of paper for the year . . . . .	1,112

	Rs.
* Note:—Includes packing . . . . .	3,910
Includes railway freight . . . . .	5,420
Income-tax . . . . .	1,048

#### OVERHEAD CHARGES.

##### (i) *Depreciation.*

114. We think the rates of depreciation allowed by the Income-tax Authorities, viz., 5 per cent. on buildings and  $7\frac{1}{2}$  per cent. on machinery, are fair.

115. The sum required annually for depreciation at income-tax rates on the total block capital is as follows:—

(a) If the assets are valued at cost—

	Rs.
On buildings . . . . .	11,487
On machinery and plant . . . . .	25,380
<b>TOTAL</b>	<b>36,817</b>

The incidence per ton of paper at the present output (say 1,100 tons) is Rs. 33·5, and at the maximum output of say 1,700 tons is Rs. 21·6.

(b) If the assets are taken at their value after deducting all depreciations written off up to date the sum required is—

	Rs.
On buildings . . . . .	7,641
On machinery and plant . . . . .	14,970
<b>TOTAL</b>	<b>22,611</b>

The incidence per ton of paper at the present output is Rs. 20·5.

The incidence per ton of paper at the maximum output is Rs. 13·3.

Taking the present cost of the buildings and machinery to be respectively 60 per cent. and 75 per cent. higher than the cost of our present mill for the same output the sum required annually for income-tax rates is as follows:—

	Rs.
On buildings . . . . .	18,379
On machinery and plant . . . . .	44,327
<b>TOTAL</b>	<b>62,706</b>

The incidence per ton of paper at the present output is Rs. 57 and at the maximum output is Rs. 36·8.

(ii) *Working Capital.*

118. The working capital which the Company requires is—

	Rs.
(1) According to the present output about . . . . .	2,20,000
(2) According to the maximum output about . . . . .	2,90,000

120. For several years since the Company commenced working it was necessary to borrow the whole of the sum required for the working capital. But from the accumulations of the reserve and depreciation funds each year the loans have been gradually paid off. For instance in the year 1913-14 the loans amounted to Rs. 1,12,466. The rate of interest paid on the borrowed sum varied from 4½ to 6 per cent.

121. The working capital is about 6·7 times the month's output (works cost only).

122. The average value of the stocks of finished goods held by the Company is about Rs. 85,000. Normally about a month elapses between production and payment.

The average value of the stocks held of raw material and coal are as follows:—

	Rs.
Paper materials, chemicals, etc. . . . .	60,000
Coal . . . . .	7,000
Mill stores . . . . .	10,000
Packing materials . . . . .	6,000

(iii) *Agent's Commission and Head Office Expenses.*

124. The Company has a Head Office in Poona, under the control of the firm of Messrs. N. Pudumjee & Co., Managing Agent and also an office in Bombay.

125.

(i) The annual amount of the Head Office and the Bombay Office expenses is about Rs. 18,500 including the agent's remuneration.

(ii) The average annual Agent's commission has amounted to Rs. 2,850.

126. The Agent's commission is determined at the rate of 10 per cent. on the net profits made and divided by the Company.

127. The cost of the Head Office expenses per ton of the finished paper is as follows:—

(1) At the present output Rs. 15.

(2) At the maximum output Rs. 9·7.

The costs of the Agent's commission per ton of finished paper is as follows:—

(1) At the present output Rs. 2·8.

(2) At the maximum output Rs. 1·7, i.e., if the extra profits expected to accrue on account of the larger production and on account of the reduced cost per unit of production is taken towards the reserve fund, and not divided by the Company.

*Manufacturer's profits.*

128 and 130. We consider a rate of dividend which is 2 per cent. to 3 per cent. above the average Bank rate or say 8 to 9 per cent. is a fair return on ordinary shares.

131. The incidence of the dividend of 9 per cent. on the ordinary shares per ton of paper is—

	Rs.
(1) At the present output . . . . .	4·1
(2) At the maximum output . . . . .	2·6

## CLAIM FOR PROTECTION.

132. We firmly contend that in claiming protection for the paper and pulp industries all of the 3 conditions laid down by the Fiscal Commission are satisfied. As to the first condition, A, we may state that the industries possess natural advantages in a remarkable degree such as an abundant supply of raw materials, cheap labour, a sufficient supply of fairly cheap power and a large and steadily increasing home market, and with particular regards to pulp-industry, the future prospects of creating a large export trade.

*Raw materials.*—The enormous available supplies of Bamboo and elephant or Savannah grasses can be utilised for the manufacture of a good quality of pulp on a large scale. In these materials India possesses valuable resources which occur under circumstances highly favourable for their commercial development. There are several locations, amongst others, which have been already investigated by Messrs. Pearson and Raitt, besides those suggested by the Mysore, Cochin and Hansda States, where all the most important conditions for the economical manufacture of pulp are found; and whereas a perpetual supply of raw materials is assured.

*Power.*—As to power abundant supplies of fuel sufficiently cheap as to compare favourably with that used by the Scandinavian and even the American Manufacturer of paper or pulp are available in India. In a well-equipped mill it requires  $1\frac{1}{2}$  tons of coal to manufacture 1 ton of paper from chemical pulp, and 1 ton coal per ton of paper from mechanical pulp. And in Scandinavian practice for the manufacture of 1 ton of Sulphate pulp the requirements are 17 H. P. during a day (24 hours) plus 8 cwt. of coal.

("The Paper-makers' Monthly Journal," 15th September 1923.) And further, about 9 H. P. a day more power will be required if sufficient bleach is produced electrolytically to bleach 1 ton of pulp (on the basis of a consumption of 16 per cent. bleach per ton) incidentally producing about 1 cwt. of Caustic. It will be seen therefore that even allowing for the lower calorific value of Indian coal the consumption is not very material, and since the power requirements are not high, the oft-raised question that cheap water power is the advantage of the Scandinavian Mills loses much of its importance for any but the manufacture of mechanical pulp. The purchase price of coal used in the manufacture of paper by the American mills was \$3.3 in 1914 and \$5.0 in 1919 per ton of 2,240 lbs. ("Paper Trade Journal," U. S. A., 14th August 1919.) It will be seen therefore that in such places where firewood is available and where a suction gas plant is best indicated or where coal fields are near, or where the advantages of tide-water communication can be got, the Indian paper or pulp manufacturer has the advantage over even his American brethren.

**Labour.**—That India has an ample potential supply of cheap labour is not disputed. But there does not exist any important class of factory workers from which the paper manufacturer can at once draw his workmen wholesale. The Indian manufacturer therefore has to depend upon himself to create in course of time his own trained labour which is sufficiently skilled and efficient for his purpose. That this is possible is proved by the existence of two great industries in India. Moreover, the skilled labour is cheap in comparison with the Western countries. The average earnings in the American pulp and paper mills in 1923, are given below for comparison ("Paper Trade Journal," U. S. A., 10th April 1924):—

		Average full time earnings per week for all occupations.
		Dollars,
<b>Paper Mills—</b>		
Men	.	24.76
Women	.	16.06
<b>News Print Mills—</b>		
Men	.	29.04
Women	.	16.55
<b>Writing Paper Mills—</b>		
Men	.	26.27
Women	.	19.40

**Market.**—The fact that India cannot supply  $\frac{1}{4}$  its demand for paper which is rapidly increasing with the growth of education, shows that there is a great scope for expansion. As to pulp, besides the present local demand, a further expansion of it is to be expected side by side with the expansion of the paper mills, and, further, a large export trade is possible.

As to the second condition laid down by the Fiscal Commission B, we are distinctly of the opinion that without protection both the pulp and the paper industries are not likely to develop at all. While India is still in the early stages of industrial development, its paper manufacturers, handicapped as they are by the small size of their mills and by the limited amount of their capital, are pitched in competition, unaided and unprotected, against an highly organized Western industry which is established years ago on a gigantic basis, which is backed by enormous capital, and which has been protected in its infancy and still protected by its respective Government. If it were not for the natural advantages offered to them by their country, it would be a marvel that the Indian manufacturers were at all able to hold their ground so long. At any rate the margin of profit is so small that the least adverse cause makes the difference from success to failure. Under the circumstances no Indian Industrialist can be expected to have the courage to invest any more



in an industry whose immediate outlook is so gloomy. As a matter of fact the unsatisfactory financial condition of most of the Indian paper mills, including the two largest in Calcutta, has shaken that very confidence of capital which is the main element in the expansion and development of an industry. But, with some protection the outlook might be vastly changed. We take our own mill as an instance. At the time our Company was established in the year 1885 the price of New Printings as then used by the Bombay presses was Re. 0-3-2 to Re. 0-3-4 per lb. Basing our calculations on this price, and on the price of rags, gunny, wastepaper, etc., as our raw materials we expected a fair return on our outlay. We commenced work with a manager, an Engineer, a beater-man, and a paper machine-man all got from England on high recommendations, and with the Indian labour wholly in conversant with the art and technique of paper making. The paper turned out during the first year or two was of a quality too poor to take the market. There was much "Broke" and "Retree" and there were sizing difficulties which even the experts could not overcome. The constant accumulation of unsalable stocks involved us in debts, and larger and larger loans were necessary to find the working capital. By the time the collection and transport of rags of the required kind was fully organised, the manufacturing difficulties were more or less overcome, and the labour had acquired sufficient skill and knowledge to manage the machines, the unrestricted influx of foreign paper and that made from mechanical pulp particularly, flooded the Bombay Market, and caused a heavy fall in prices. As a matter of fact if it had not been for the timely help afforded to us by the Government of Bombay by having taken even at the market prices most of their requirements from us in a quality, which though satisfactory for their use, was yet not quite up to mark, we should have ceased to exist long ago. Thus crippled in its infancy our mill has never rallied. Beyond a bare subsistence it has done nothing more. We have had no chance to modernize our mill, none even to effect the necessary important improvements with a view to increased efficiency or economy. That we have been able to hold our own was due to the exercise of strict economy in every detail, to Government support, and to the fact that with increasing knowledge and experience gained by our workmen we were able to keep on our production of a good quality of paper with more and more economy. But if we had been afforded some little protection during the commencement of our work the case would have been different. With larger reserve funds following on the lines of some of the most successful cotton mills in India, we would have replaced old for modern and up-to-date machinery and appliances. Particularly would we have got out another and an up-to-date paper machine to complete a two-machine mill for which our mill was originally laid out, having been at the outset furnished with building, power, preparatory machines and beating engines sufficient for two machines. Moreover, and this might have been of far-reaching consequences, by giving higher wages a better class of workmen, and larger numbers, could have been induced to learn the work, and acquire the high degree of skill and knowledge which modern paper-making requires. Thus, established on a profitable basis, with the confidence created in the capitalists, a further development was possible.

As to the third condition laid down by the Fiscal Commission, C, we claim that the industry will eventually be able to face world competition without protection.

We see no reason why, given an equipment as efficient as the Western mills, with all the latest methods of economic power production and utilization, and working on a fairly large scale of production of say 10,000 tons, if not more, per year, we should not be able to compete with the foreign manufacturer even taking into count the standard of efficiency at present attained by Indian labour and even if we should have to work with imported pulp on the same lines as the European mills, using the same quantities of pulp as they do, provided time is allowed to train Indian labour in the required numbers. To show how this is possible we shall refer again to our cost of production during the normal year 1913-14 as shown on page 14.

Taking the cost of conversion exactly as then obtained but supposing we had manufactured nothing but a good quality of book printing paper and worked with imported bleached sulphite and soda pulp, on the same lines as the American mills, we should have obtained the results worked out as follows:—

(Given in round figures.)

Tons paper produced . . . . .	1,110	
Stock—		
		Rs.
497 tons Bleached soda pulp at Rs. 205 . . . . .		1,01,880
472 „ Sulphite pulp at Rs. 216 . . . . .		91,170
105 „ Shavings at Rs. 80 . . . . .		8,400
255 „ China clay at Rs. 60 . . . . .		15,300
27 „ Alumina sulphate at Rs. 90 . . . . .		2,430
20 „ Rosin at Rs. 230 . . . . .		5,800
2 „ Caustic and dyes, etc. . . . .		1,110
	TOTAL	2,26,070
Conversion—		
Labour . . . . .		29,000
Coal . . . . .		33,030
Repairs and Engineer's stores . . . . .		17,980
Wires, felts, belting and lubricants . . . . .		10,120
Packing and rail freight . . . . .		9,330
Miscellaneous . . . . .		3,950
	TOTAL	1,09,410
General expenses—		
Taxes and insurance . . . . .		4,870
Administrative—		
		Rs.
Supervision including Manager, Engineer, Foreman, and local office charges . . . . .		15,620
Agent's remuneration, and Head Office and Bombay Office charges . . . . .		16,500
	TOTAL	36,990
		Rs. A. P.
Total cost without depreciation . . . . .	3,66,470	0 0
Total cost per ton of paper . . . . .	330	0 0
Total cost per lb. of paper . . . . .	0	2 4

NOTE.—The actual labour cost during the year was Rs. 34,470, but this included Rs. 5,470 being the labour cost of sorting, chopping and boiling rags, etc., which would be dispensed with when using pulp only.

Coal is calculated at 1½ tons per ton of paper. The European practice is 1½ tons per ton of paper, but the higher figure is taken for calculation as a safe basis.

The selling price of similar paper in Bombay in 1914 was Re. 0-2-4 to Re. 0-2-5½ per lb.

It will be seen that, even working on an incomparably small scale, without even modern or up to date equipment, the cost of production does not com-

pare so unfavourably with the selling price as that with more modern machinery and appliances, and with working on a larger scale the cost could not be so reduced as to leave a fair margin of profit even after allowing a sum for depreciation and reserve. For instance if we had had the opportunity to have completely modernized our mill, introduced a new power plant and also a new paper machine so as to have completed our original plan of a two-machine mill, we would have been able to manufacture, working both the machines together, at least 3,600 tons per year, and in that case the cost would have been as follows:—

(Given in round figures.)

Tons paper produced . . . . .	3,600
	Rs.
1,612 tons Bleached soda pulp at Rs. 205 . . . . .	3,30,460
1,368 „ Bleached sulphate pulp at Rs. 216 . . . . .	2,95,490
342 „ Shavings at Rs. 80 . . . . .	27,360
828 „ China clay at Rs. 60 . . . . .	49,680
90 „ Alumina sulphate at Rs. 90 . . . . .	8,100
65 „ Rosin at Rs. 290 . . . . .	18,850
9 „ Caustic and dyes, etc. . . . .	3,600
<b>TOTAL</b> . . . . .	<b>7,33,540</b>
	Rs.
<b>Conversion—</b>	
Labour . . . . .	58,000
Coal at Rs. 17 . . . . .	1,07,100
Repairs and Engineer's stores . . . . .	35,960
Wires felts, belting and lubricants . . . . .	25,240
Packing rail freight . . . . .	30,320
Miscellaneous . . . . .	7,900
<b>TOTAL</b> . . . . .	<b>2,64,520</b>
	Rs.
<b>General Expenses—</b>	
Taxes and Insurance . . . . .	7,000
<b>Administrative—</b>	
Supervision and Local Office charges . . . . .	20,000
Agent's remuneration, Head Office and Bombay Office . . . . .	22,000
<b>TOTAL</b> . . . . .	<b>49,000</b>
	Rs.
Total cost without depreciation . . . . .	10,47,060
Total cost per ton of paper . . . . .	291
Selling price per ton of paper (at Re. 0-2-4 per lb.) . . . . .	326-7

It will be seen therefore that if the production has been increased about three-fold the cost would have been reduced to a figure which was well within the selling price. From figure given above it is easy to see that if worked on an economical scale of say 10,000 tons per year if not more, with up to date machinery and appliances, a paper mill could be established in India on a profitable basis, even if it were necessary to import the bulk of its requirements of pulp, and that the mill could eventually afford to be without protection as soon as its Indian workmen had acquired the degree of know-

ledge and skill required to work a modern paper mill and could produce from a similar materials paper, which if not quite equal to that produced by their more advanced European and American brethren, was yet sufficiently up to mark.

133. We further claim that the paper and pulp industries fully satisfy also the two conditions mentioned in the Fiscal Commission's Report, viz. :—

- (a) That the industry is one in which the advantages of large scale production can be achieved, i.e., in which increasing output would mean increasing economy of production and
- (b) That it is probable that in course of time the whole need of the country could be supplied by the home production.

We give below the average cost of conversion per ton of paper for 39 principal book-paper mills in America during the year 1915, the average production per mill being 14,764 ton (English ton). The figures (corrected to English ton of 2,240 lbs.) are taken from Witham's 'Modern pulp and paper-making.' Accurate figures for 1914 are not available, but in America the cost in 1914 was practically the same as 1915, if anything it was a trifle higher. We also give for comparison the corresponding figures to denote cost obtained by ourselves during 1914, and cost as shown on page 20.

	Cost per ton of paper, American Book Paper Mills, Production 14,800 Tons per Mill.	Cost per ton of paper Our Mills 1913-14, Production 1,110 tons.	Cost per ton of paper Our Mills, as shown on page 20 production 3,400 tons.
Conversion—	\$      Rs.	Rs.	Rs.
Labour . . . . .	9.70=31.52	26.02*	16.11
Fuel . . . . .	3.22=10.46	59.86	29.75
Repairs . . . . .	1.78= 5.16	16.20	9.98
Wires, Felts, Belting and lubricants	1.46= 4.74	9.11	7.01
Packing and Shipping	1.59= 5.16	8.45	8.45
Miscellaneous . . .	1.44= 4.68	3.56	2.19
General expenses—			
Taxes and Insurance	.77= 2.59	4.39	1.94
Administrative . . .	1.90= 6.17	14.07 Supervision.	5.53
		14.86 Agent's Remuneration and Head Office.	6.11

NOTE.—The figure for a proper comparison with the American figure has been arrived at after deducting the labour which was employed on rag sorting, chopping and boiling.

A comparison of the figures will help to illustrate the advantages of large scale production in a paper mill. It will be seen that the labour cost at our mills amounted to Rs. 26.2 per ton as against Rs. 31.5 in America. The average full time earnings per week in American Book-paper mills of males in all occupations amounts to \$27 and of females to \$16.04. We may compare this with Indian labour (in Poona) as follows:—

	American (8 hours a day) per week.	Indian (10 hours a day) per week.
	\$    Rs.	Rs.
Males . . . . .	27 = 86	4 8 0
Females . . . . .	16.4 = 52½	2 4 0

Even granting that Indian labour is two to three times less efficient, and allowing for this, American labour is still at least 6 times more expensive, and yet the labour cost per ton of paper compares as American Rs. 31.05: Ours Rs. 26.02 instead of Rs. 6: 1. The advantage of large scale production in the saving of labour is obvious. If we take into account one item of supervision, viz., the Manager, it goes without saying that an average American Mill, producing say 14,700 tons, can better afford to pay a salary of even say Rs. 13,000 per month to its manager than our mill and can afford to pay even Rs. 1,000 and the advantage to them is obvious. It will be seen therefore that the full advantage of the cheap labour cannot be obtained until the production is increased beyond a certain limit.

As to coal, owing to their larger production and their larger and efficient power units the American Mills have been able to bring down their cost of coal per ton of paper to as low a figure as \$3.02 (Rs. 10.5) per ton, which means a little over one ton coal per ton of paper. This is even less than is obtained in European practice where the consumption of 1.25 tons coal per ton of paper made from chemical pulp is considered a very good figure. Our coal consumption in 1913-14 amounted to 3.4 tons per ton of paper including the use of rags or 2.5 per ton made from pulp alone. Therefore with a large scale production and a large power plant a reduction down to at least 1.5 tons per ton must be expected on paper made from pulp.

As to felts, and wires, we would expect a certain saving with larger output. A fast running paper machine producing say twice as much paper as another will not be twice as expensive on wires, felts, and jackets. On comparing the American cost per ton it will be seen that with a larger output a great reduction in cost is possible, even after making an allowance for the higher cost of the material in India.

As to repairs, since the Indian paper mills must keep their own well appointed mechanic shop, the maintenance of which is a heavy item, the cost per ton of paper can be considerably reduced by increasing the output.

As to overhead charges and depreciation it is obvious as in all other industries, that the incidence per unit of production is less as the production is increased. But this is more appreciable in a paper mill than, for instance in a cotton mill where the manufacturing units are more or less standardised. But in a paper mill the units vary considerably, and for example a paper machine built to produce say 20 tons per day will not be 3 times as expensive as that made to produce 7 tons a day, and beater to hold 2,000 lbs. stuff will not cost 4 times as that meant to hold 500 lbs., and therefore the incidence of depreciation per ton of paper is much less in a comparatively larger mill.

As to the question whether the whole needs of the country for paper and pulp can be supplied by the home production we may mention that the existing mills are already supplying about one-third the country's total demand for paper and the fact that their annual production increased by 5,000 tons during the war strongly demonstrates the possibilities of expanding the output even under the abnormal conditions created by the war, when the supplies of foreign pulp were stopped, and when the difficulties of manufacture and of obtaining chemicals and materials were enormous. There is therefore no question as to whether the production will meet the country's entire demand for paper, but the fear is the output may outstrip the demand. With the establishment of the paper industry on a firm basis the demand for pulp is assured. And with the impetus thus given, and if at the same time the stimulus of protection were provided, a rapid development of the pulp industry, can be looked forward to with confidence. And it is here that India has a chance of creating an industry which is likely to surpass the two of her most successful and largest industries, viz., jute and cotton. When it is realised that there are enormous supplies of quickly replaceable materials it will be seen that it only requires development on scientific lines to place India in a particularly advantageous position as regards the production of pulp. Mr. Raitt in 1919 estimates that India can produce 15 million tons of pulp from Bamboo and Savannah grasses. "Taking only that which is available under sound manufacturing conditions." This means that India alone has within her territories pulp supplies sufficient for the whole world.

134. That the paper industry is of importance on national ground and therefore deserves protection apart from economic consideration was most forcibly demonstrated when put to the test during the war. In this connection we cannot do better than quote Mr. Barbour: "If not fully appreciated during time of peace the importance of the paper industry to this country was certainly brought home to most people during the war, and none perhaps more forcibly than to those responsible for the public services and for the direction of Indian Military efforts. When the first expeditionary force left India's shores for France, it took with it a printing press and a large supply of Indian-made paper. Wherever Indian troops moved, whether to Egypt, Mesopotamia or East Africa there Indian-made paper went to furnish the stock in trade of the Army's administration, to be the vehicle of instruction and information. No doubt during recent years many readers like the writer, have noticed the familiar Indian imprint on the innumerable Army forms also supplied to forces other than those from India. Indian Mills not only met the demand of the Army on the far-flung field and assisted the production of munitions but so increased their output that they were able to supply the Indian Government's Telegraph and Postal Services and Railways with supplies far in excess of contract quantities, to assist other Governments as those of Ceylon, the Straits and Hongkong, and at the same time to keep the general business of the country and many of the important newspapers remarkably well supplied with their munitions of war. Japan for a time contributed her quota but had it not been for the Indian Mills there would have been a paper famine in India—to say nothing of the probable dislocation of industry and trade, and the resulting reaction on India's war efforts.

"Costs and prices of papers rose, as did the price of most commodities in the abnormal conditions of the war periods, but the Indian paper Mills were able to make supplies to the public services at much lower rates for example than those paid by British Government. A striking testimony to the good sense of the Indian Manufacturers and to generous and patriotic way in which they met the situation is the fact that India alone of all paper-making countries was able to do without the intervention of Government control over the distribution and supply of paper." (A. R. Barbour, O.B.E., "Journal of Indian Industries and Labour," November 1921). In this connection the remark made to us by the Superintendent of Printing and Stationery that if we had failed to supply the whole needs of Bombay Government during the war he would have had to recommend the commandeering of our mill, is worth mentioning. Therefore a serious situation from a national point of view is

created by the fact that the Indian Mills have not been able to recover from the difficulties of the post-war periods, and almost every mill small or large has either been working at a loss or with no profits at all. And therefore if no protection were given to the mills at least till the time that the prices of raw materials and paper have reached an economic basis, most of the mills will cease to exist altogether.

136. Since all kinds of paper can be manufactured in India we see no reason why protective duties should not be imposed on all. However, such papers as, hand made, coated art paper, tissues, etc., which are not likely to be made in India till the industry is established on a large scale, might be exempted. Probably any paper that costs 8d per lb. f.o.b. European port will be exempted from any further duties, because with respect to similar papers which can be made in India, the foreign prices *plus* the existing revenue duties are remunerative. But with respect to common brown or wrapping papers, and also kraft, we strongly recommend a duty which will be at least 5 per cent. more than what will be deemed necessary on white writing and printing papers. Because it is in these lines that German competition is felt the most, while the waste materials available in India, such as gunny, old ropes, old canvas, waste rags, waste papers, etc., have not been sufficiently utilised. Further, it has been found that a strong kraft pulp can be made from Bamboo and therefore in course of time the manufacture of kraft papers can be developed to the mutual advantage of the pulp and paper industries.

The different varieties referred to above can be readily distinguished for customers' purposes.

137. It is difficult to suggest any satisfactory measures to safeguard paper and pulp industries against underselling by reason of depreciated exchanges, subsidised freight, dumping and other causes of unhealthy competition, but as a set off against these we would look to Government for assistance. We would ask for a favourable treatment, as regards to railway rates. Railway freight on coal from Bombay to Poona is Rs. 2-12 per ton, whereas on pulp, raw materials and finished paper, whether in waggon loads or in small consignments, it is much higher. We suggest that finished paper and all raw materials required for the manufacture of paper carried in waggon loads should be charged at the same rate as coal. Further, we would ask from Government a continuance of orders for paper. The Indian mills owe their existence more or less to the support given to them by the Government, and the Mills fully recognise their great indebtedness to the Government for it. Mr. Barbour has aptly said referring to the performance of the mills during the war, "the amounts set aside for dividends to shareholders, though large in comparison with pre-war figures are relatively small when compared with the sums which have to be provided to finance the industry and indeed, much less than they might have been had the companies concerned taken full advantage of their opportunities and charged prices for their product equivalent to those in vogue elsewhere. That they did not do so was due to their recognition of their indebtedness to Government for the support afforded them in earlier years and the reasonable expectation that that support would be continued when the period of emergency was succeeded by the troublesome times of peace." Government support is particularly necessary because an early recovery of the mills from the depression of the post war period is most essential. And therefore we ask that all Government Offices and Railways should distinctly specify that, as far as it is possible, all paper required for their use must be Indian-made, provided no undue advantage of this is taken by the Indian Manufacturers. In this connection we may mention that the Indian-made half-bleached or Badami paper is the cheapest wood-free paper in the market, and it is almost equal in lasting and other qualities to the Indian White printings, because both are made from the same raw materials, but with the difference that the Badami paper is not fully bleached, to effect a saving in the chemicals. Therefore the Government Offices and Railways are justified in using Badami papers in large quantities, as a saving to themselves and a help to the Indian manufacturers. And yet, because the Railways do not specify that the Badami required by them should be

Indian-made, there are instances that the Indian Printing Presses, to the great detriment of the Indian manufacturers, have used for printing railway forms large quantities of foreign paper which are made with a prepondering quantity of mechanical pulp and are therefore very little different from the ordinarily imported news printing papers. Yet, this paper is passed as Badami because it is tinted yellow. Therefore in all fairness to themselves and in fairness to the Indian manufacturers, we ask that the Railways should specify that the Badami required by them must be Indian-made.

139. As to the amount of protection required, we may argue that since it is the object of protection that the paper industry should be developed as rapidly as possible, not only for its own sake but more particularly with the ultimate object of creating a demand whereby the establishment of another industry of larger importance, that of pulp manufacture, be stimulated. Protection must therefore, encourage the expansion of the existing paper mills, and the creation of the new ones, even if they have to depend at first upon imported pulp. We have shown on page 19 that under normal conditions, as for example those obtained in 1913-14, using only imported pulp we could manufacture superior white printing which could sell at Re. 0-2-4 per lb. By working the mill at its full capacity producing 1,700 tons per year instead of 1,110 as in 1913-14, the cost could be reduced (on the same lines as shewn on page 19) and the paper could be made at Re. 0-2-3 per lb. If, then, there were a protective duty of 14 per cent. over and above the normal 5 per cent. the gross profits would amount to about Rs. 97,000 which might be divided as follows:

Rs. 40,000 Dividend at 8 per cent.

Rs. 36,000 for Depreciation at about  $7\frac{1}{2}$  per cent. on machinery and 5 per cent. on buildings.

Rs. 12,000 Interest on working capital.

Rs. 5,000 Reserve.

Rs. 4,000 Agent's Commission.

Therefore under normal conditions, an import duty amounting to 19 per cent. would be of considerable help to the industry. But under the prevailing abnormal conditions created by the depression in the world's trade, and by the depreciated currencies, when the prices of most commodities are fluctuating without reference to their manufacturing costs, it is difficult to arrive at any definite figure for protection. However, considering the fact that the former profits of all the Indian mills have been wiped off under the prevailing difficulties, an increase in the import duties is necessary amounting 6 to 8 per cent. over what would be required normally. We should say a protective duty of 25 per cent. on imported paper would help the existing mills to tide over their present difficulties. But the full advantage of the protection will not be felt until the normal conditions are restored and prices have reached their economic level.

140. With respect to the question why the paper industry which has been in existence in India for a number of years is still in need of protection, we have already stated the facts under which the growth of the industry has been retarded, and have given the instance of our own mill. As a matter of fact the Indian manufacturers have not been afforded a chance for improving their mills and bringing them up to date. The latest paper machine in the two largest mills in Calcutta dates back to the year 1893.

The paper industry exactly represents the case stated by the Fiscal Commission in paragraph 64 of their report which we quote here, "In the first place there may clearly be cases in which the free interplay of economic forces will not secure the best utilisation of the capital and labour resources of any country. In the competitive struggle an initial advantage may prove to be a permanent advantage. A fully developed industry in one country may be able under conditions of unfettered competition to hinder the development of the same industry in another country possessing equal or even greater natural advantages. In these circumstances the latter country may never,



or only after a long delay, succeed in applying its labour and capital to the best advantage of which they are capable, owing to the initial difficulties in making a start. These considerations were stated many years ago with admirable lucidity by John Stuart Mill, who wrote 'The superiority of one country over another in a branch of production often arises only from having begun it sooner. There may be no inherent advantage on one part or disadvantage on the other, but only a present superiority of acquired skill and experience. A country which has this skill and experience yet to acquire may in other respects be better adapted to the production than those which were earlier in the field.' "

The words might almost have been written with particular reference to the paper industry.

141. There is a direct conflict between the claims for protection put forth by the two industries, Pulp and Paper, being two related industries, inter-dependent for their existence and development. In the year 1912-13 no less than 13,250 tons of pulp were imported into India, a figure representing more than half the total Indian production of paper during that year. Therefore, if an import duty were levied on paper and pulp alike, those mills which are so considerably dependent upon the imported pulp as the figures denote will be in a position worse than now. Moreover, imported pulp is not only meant to supplement the raw materials available locally, but it is also used for the purpose of imparting certain qualities to the finished paper in which the local materials are lacking. For instance, paper made from certain classes of rags obtained in Bombay is bulky and soft handling and lacks in those definite qualities by which the Stationers and Printers judge the merits of a paper, *viz.*, the rattle, feel, and handle of the sheet. These qualities are imparted by the addition of imported Bleached Sulphite Pulp (spruce), and these are qualities which even the imported soda and sulphate pulps cannot impart, much less would such pulp as esparto and bamboo. Hence any restriction on the imported pulp, while restricting the manufacture of certain kinds of paper, also restricts the use of even those materials that are available in India.

Moreover, it is our firm belief that unless the present Indian system of manufacturing paper, *viz.*, that the paper-maker also makes his pulp in his own mill, is abandoned, any development or expansion of either industry is not possible. There are very few locations, if any, in India, where in one and the same place all the most important conditions for the economical manufacture of both paper as well as pulp can be satisfied. Therefore the immediate aim should be to divide the two industries so that the two form entirely separate but related industries, one depending on the other, as is the prevailing practice in Europe and America. But the imposition of duty on pulp will retard the attainment of this very object which is the protectionists' own aim to attain. Because, it encourages the manufacture of pulp for own use under unfavourable circumstances, which by unfair competition drives out of existence those very mills that create a demand for pulp. Such protection therefore defeats the very end it tries to seek.

The obvious remedy would be a duty on imported paper and a corresponding bounty on pulp made and sold as such.

In conclusion we may say that the industry presents a strong case for protection. All the natural advantages are in the country, but the initial advantages are with the foreign rivals. In India the difficulties at the start are great, and skilled labour has to be created. Therefore the infant industry fails to compete with established rivals on equal terms. It is crippled in its infancy, it has no chance to rally, and capital, already too shy, is scared.

But, we have proved that with the help of protection, a larger paper industry can be based on imported pulp to start with. The paper industry in its turn by creating a demand for pulp stimulates the growth of another, and a great industry which is likely to surpass the greatest in the country. The present loss to the country is nothing as compared to its future gain. The loss sustained by the newspaper owners and book-printers is not material.



## No. 9.

## Government of Bombay.

*Letter, dated the 27th May 1924, from the Government of Bombay, forwarding replies to questionnaire No. 11.*

I am directed by the Government of Bombay (Transferred Departments) to refer to your letter No. 352, dated the 1st May 1924, on the subject mentioned above.

2. In reply I am to forward herewith a copy of the note prepared by the Director of Industries, Bombay Presidency (whose post has since been abolished) giving detailed information on the several points referred to in paragraph 3 of your letter under reference together with a statement "A" containing information regarding existing paper mills in this Presidency. The list of publications referred to in paragraph 2 of your letter may be supplemented by the publications named in statement B† enclosed herewith.

Enclosure I.

*Copy of the note prepared by the Director of Industries.*

The following are the replies to the questions asked in the letter from the Secretary, Tariff Board.

A. RESEARCH AND INVESTIGATIONS.

These questions may be answered comprehensively as follows:—

Raw materials considered are three—

- (1) Bamboo.
- (2) Grass.
- (3) Rice straw.

(1) *Paper from Bamboos.*

Practically all the information collected regarding bamboos has been published in Mr. Pearson's Note in Vol. IV, Part V, of the Indian Forest Records. The information regarding Kanara supplies of bamboo is not up-to-date as the bamboo seeded a few years ago and died. I have been in correspondence with the Forest Economist regarding a fresh survey and it was arranged that Mr. Raitt, the Cellulose Expert with the Government of India, should make the survey this year. At the last moment, however, his plans were cancelled.

For a considerable time a concession to work the bamboo areas in Kanara was under discussion with a Syndicate under the management of Messrs. Turner, Morrison & Co. The terms of the concession were settled but the Syndicate finally withdrew.

\* Enclosure IV.

† Not printed.

In addition to the bamboo areas in Kanara there are bamboo areas in the Dangs which have been investigated by Mr. R. S. Pearson, the Forest Economist, who can doubtless supply his notes to the Tariff Board. This area was also investigated for the Hon'ble Mr. Lalubhai Samaldas by Mr. Dhruva Sumanas. Both these gentlemen might be asked to give evidence.

I do not consider the data regarding bamboo supplies, the cost of collecting them, the availability and cost of collecting other materials and chemicals and the suitability of available factory sites are sufficient to judge of the commercial possibilities of bamboo paper pulp factories in Kanara or the Dangs. These possibilities require re-examination in the light of present day conditions by an expert.

Labour supply in Kanara is scarce.

The Forest Department do not seem very favourable to a scheme for a bamboo paper pulp factory in Kanara at least. As the terms settled with Messrs. Turner, Morrison & Co. show that there is little revenue to be gained from the scheme while a factory will make claims on the local labour supply which the forest department already find inadequate for the normal exploitation of their forests, I suggest that the Tariff Board should examine the Chief Conservator of Forests regarding the attitude of the Forest Department towards schemes in Kanara and the Dangs.

### (2) *Paper from grass.*

A concession has been granted in West Khandesh to Messrs. Kamat and Sons. The scheme and the terms of the concession are explained in G. R. No. 4426, dated 12th November 1923, G. D., copy enclosed herewith. The scheme was prepared for Messrs. Kamat and Sons (14, Hamman Street, Bombay) by Messrs. Sindall & Bacon, Consulting Chemists, for Papermaking (27, Walbrook, London, E. C.) and Messrs. Boving & Co. (Paper Machinery Manufacturers), 56, Kingsway, London, W. C. 2. Messrs. Kamat and Sons have prepared a confidential booklet explaining the scheme and will doubtless be prepared to supply it and any other information required to the Tariff Board. I suggest that they should be examined by the Board and also Mr. Sindall, if he revisits India. Nothing has yet been done to start a scheme; the agreement was only signed last April.

I understand that the Chief Conservator of Forests is doubtful of the suitability of the Khandesh grasses for paper pulp and, in consultation with the Forest Economist, I suggested to Messrs. Kamat and Sons that they should send two or three tons of the Khandesh grasses to the Forest Research Institute, Dehra Dun, for an experimental test in the Institute's new paper pulp plant. I received no reply to this suggestion. I presume that Messrs. Kamat and Sons are satisfied with the tests they have already made. The Chief Conservator of Forests, the Forest Economist (Mr. Pearson) and Mr. Raitt may be asked by the Tariff Board for their opinions on this scheme.

### (3) *Strawboards from rice straw.*

Preliminary information was collected by this Government and was published in a Press Communiqué, copy enclosed herewith. No further tests or attempts to work out costs have been made.

B. *Concessions* granted have been two only referred to above—one (Messrs. Turner Morrisons') surrendered and one (Messrs. Kamat and Sons) not yet brought into operation. (2) Local sentiments against the grant of such concessions is not known to exist.

C. *Conditions and cost of transport* for the bamboo schemes which have been suggested and the grass scheme in West Khandesh can be ascertained from the sources already mentioned.

*D. Local Demand for machine paper.*—Imports into Bombay and Karachi of paper and paste board in recent years are:—

Principal and other articles.	QUANTITY IN CWTs.			VALUE IN RS.		
	1919-20	1920-21	1921-22	1919-20	1920-21	1921-22
<b>BOMBAY.</b>						
Paper and paste board paper packing:	7,046	49,166	27,003	3,74,560	22,37,500	7,89,918
Printing paper	1,02,000	2,14,591	80,129	29,42,520	94,03,890	22,31,867
Writing paper and envelopes.	..	1,67,402	54,135	24,81,300	96,24,610	23,51,858
Other kinds of paper	1,71,902	1,38,326	1,45,378	32,30,800	46,00,580	21,81,827
Paper Manufacture	..	3,590	1,994	1,29,800	2,76,530	1,69,017
Paste Board, Mill Board and Card Board of all kinds.	83,589	69,192	76,891	13,82,710	13,13,740	10,78,249
<b>TOTAL OF PAPER AND PASTE BOARD VALUE.</b>	..	..	..	105,41,690	274,56,630	87,82,236
<b>KARACHI.</b>						
Paper Packing	1,289	1,720	552	26,240	82,540	33,141
Paper, Printing	8,603	24,877	23,663	3,67,320	14,12,150	8,47,633
Paper, Writing and Envelopes.	..	21,058	3,982	2,85,520	17,58,420	2,82,778
Other kinds of paper	38,338	62,424	38,140	5,41,570	10,27,540	4,89,233
Paper Manufactures	..	739	192	40,480	88,030	27,762
Paste Board, etc.	536	3,011	5,804	11,410	81,910	80,559
<b>TOTAL OF VALUE</b>	..	..	..	12,72,540	44,80,590	17,41,106

Local production is given in Statement "A."

Enclosure II.

### PRESS COMMUNIQUE.

#### *The manufacture of strawboards.*

An industry that has not hitherto met with the attention it deserves in this country is the manufacture of strawboards, of which large quantities, amounting in value to about 8½ lakhs of rupees in 1913-14, are imported into India. The chief exporting countries, prior to the war, were Holland, Germany and the United Kingdom. Recently imports from Japan are noticed to have been increasing with great rapidity. The purposes for which strawboards are used are mainly packing yarn in bundles, book-binding, constructing cardboard boxes and mounting pictures. There must, therefore, always be a large demand for this article, the local manufacture of which should repay the investment of capital in this country. The chief raw materials required are straw and lime, the straw being converted into pulp by digesting

with lime and water (milk of lime). The following is a brief description of the process obtained from the Imperial Institute:—

" The straw is chopped into pieces from 1 to 2 inches in length and is placed in revolving boilers with the "milk of lime." About 800 gallons of water and 2 to 4 cwt. of lime are used for each ton of straw. The charge is digested in the boilers for about 4 hours with steam at a pressure of 60 lb. per square inch and is then discharged. The digested straw is converted into pulp by treatment in an edge runner mill, or in beating machines. The pulp thus obtained is used for the manufacture of boards and coarse packing papers.

A ton of straw is stated to yield from 12 to 14 cwt. of pulp suitable for the manufacture of strawboard. The pulp is run on to a paper-making machine where the water is removed, and is then built up into boards of the desired thickness by winding it round a press roll. The boards are dried in hot air chamber or in the open air."

Straw is also used in Europe, in addition to its use for the production of boards and packing papers, for the manufacture of higher grade paper, comparable with esparta papers for which purpose, however, it is digested with a solution of caustic soda instead of with milk of lime.

From enquiries made by the Indigenous Industries Committee, it has been ascertained that the cost of machinery for the production of both paper and boards on a moderately large scale would be about three lakhs of rupees at the present time, excluding freight the cost being reduced by about 12 per cent. if the plant is required for the production of boards only. This is, however, not recommended, as the production of paper is said to be more profitable than of boards. The plant has been specially designed for the treatment of straw, grass and like materials by a very cheap process.

Further particulars of the plant as well as information regarding the available literature on the subject can be obtained on application to the Secretary, Indigenous Industries Committee, Secretariat, Bombay.

No. 5202.

GENERAL DEPARTMENT:

Bombay Castle, 25th July 1917.

Forwarded to—

The Commissioner in Sind (with the request that the Press Communiqué may be published in the Sind Official Gazette and that printed copies of the translation of it into Sindhi may be distributed to the Editors of Sindhi Newspapers in Sind).

The Commissioners of Divisions.

The Commissioner of Customs, Opium and Abkari.

The Collector of Customs, Bombay.

The Chief Collector of Customs in Sind.

All Collectors including the Collectors in Sind and the Deputy Commissioner, Upper Sind Frontier.

The Director of Agriculture.

The Accountant General.

The Private Secretary to His Excellency the Governor.

The Secretary, Indigenous Industries Committee.

The Oriental Translator to Government (with a request that the Press Communiqué may be translated into Gujarati, Marathi and Kanarese and that printed copies of the translations may

be distributed to the Editors of the Vernacular Newspapers in those languages in the Presidency Proper including the Town and Island of Bombay).

The Political Agent, Savantvadi.

The Editors' Tables and Editors of Newspapers.

All Registered Libraries.

The Manager, Government Central Press.

The Separate Department of the Secretariat (for the Reading Room for the Members of the Legislative Council).

The Non-official Members of the Legislative Council.

The Revenue Department of the Secretariat.

The Political Department of the Secretariat.

The Public Works Department of the Secretariat.

The Financial Department of the Secretariat.

\*The Government of India.

\*The Honourable the Resident in Mysore.

\*The Director General of Commercial Intelligence.

\*The Secretary, Industries and Commerce Committee, Bangalore.

\*The Editor, the Indian Engineer.

\*The Editor, the Indian Textile Journal.

G. A. THOMAS,  
*Secretary to Government.*

Enclosure III.

*Industries.  
Paper Mills.*

Agreement with Messrs. B. Sitaram and Son in respect of a paper mill proposed to be erected by them in West Khandesh.

व्यापार नयन

## GOVERNMENT OF BOMBAY.

### GENERAL DEPARTMENT.

Resolution No. 4426.

Bombay Castle, 12th November 1923.

Letter from Messrs. B. Sitaram and Son, dated the 26th January 1922:—

“ We beg to enclose a formal application for assistance from the Government on the subject of the above scheme.

“ The application has reference to five matters, each of which may require to be sent to a separate department for consideration.

“ We have, therefore, prepared several copies of the application which is now being forwarded to:—

1. The Secretary, Revenue Department, Government of Bombay.
2. The Minister for Industries, Government of Bombay.
3. The Minister of Forests, Government of Bombay.
4. The Minister for Irrigation, Government of Bombay.

\* By letter.

5. The Chief Engineer for Irrigation, Bombay Presidency.

6. The Chief Conservator of Forests, Bombay Presidency.

We should esteem it a favour if you will kindly acknowledge the receipt of this letter, and let us know that we are right in submitting the matter to your attention."

Memorandum to the Director of Industries, No. 4031-D., Revenue Department, dated the 6th February 1922.

Letter from the Director of Industries, No. B-2173-1196, dated the 16th February 1922:—

"I return the accompaniments to the reference quoted above and beg to make the following remarks:—

2. The matters on which the promoters require assistance are—

(1) and (2) *Supplies of Grass*.—I am in consultation with the Forest Utilisation Officer who is consulting the local forest officer at the present moment.

(3) *Exemption from import duty for imported chemicals*.—This is a matter for the Imperial Government. I have discussed it with the promoters and explained the weakness of their case. Their chief requirement is bleaching powder. Exemption from duty on imported chemicals cannot be given to them without conferring a similar concession on all paper manufacturers in India. Other manufacturers using bleaching powder might claim similar exemption.

(4) *Water supply from river Tapi*.—I understand that Government have not taken any action in this matter and I have, therefore, addressed the Collector of West Khandesh. Copy of my letter is attached.

(5) *Acquisition of land for site*.—I understand that Government desire not to use the Land Acquisition Act in a case of this kind if it can possibly be avoided, and I have advised the promoters to obtain, if possible, land by private negotiations. They say that their difficulty is that the lands they require are Inam lands which cannot be alienated but I have explained that this can probably be arranged with the sanction of Government which is not likely to be withheld.

3. One matter which requires consideration is the disposal of the effluent, and I think Government might instruct the Director of Public Health to investigate this point. The promoters assured me that their effluent was harmless and suggested it might be used for purposes of irrigation. Till the scheme is matured and it is definitely known where the effluent will be discharged, it is probably impracticable to reach a decision, but I think it might be intimated to the promoters that the concessions for grass and water will be granted only if they make arrangements for the disposal of the effluent which secure the approval of Government. I do not think it would be sufficient to allow them to make their own arrangement and trust to section 61 of the District Police Act, if the local population subsequently raise objections."

Memorandum to the Chief Conservator of Forests, Bombay Presidency, No. 4031-D., Revenue Department, dated the 6th February 1922.

Memorandum from the Chief Conservator of Forests, Bombay Presidency, No. 275, dated the 28th April 1922:—

"Returned with compliments to the Under Secretary to Government, Revenue Department.

2. There is no objection to the establishment of a paper mill in the West Khandesh District, but the reservation of 40,000 acres of forest land for this purpose is in excess of the company's requirements and is likely to affect the grazing and fodder requirements of the district, particularly in times of famine when the Shirpur forests form the principal fodder reserve for East



and West Khandesh districts and other districts in the Deccan. The whole forest area of Shirpur East and West Rauges is 203,816 acres of which roughly  $\frac{1}{2}$  is under closure to grazing under sanctioned working plans. The open areas afford grazing in normal years to about 80,000 cattle, of which over 25,000 head belong to professional graziers and are brought down annually from Malwa, Central India, for supply to Khandesh and other Deccan districts. These latter come along the Bombay-Agra road and are grazed in the Shirpur forests for a couple of months in the rains prior to being sold. It is of the utmost importance to the agriculturists of the Deccan that the import of good breeds of cattle should be encouraged and with this view, apart from areas under closure under working plans it will be impossible to exclusively reserve for the company any extensive areas within a four-mile limit of the Bombay-Agra road. Any attempt to do so would cause a large drop in the grazing revenue of the division and would tend to discourage in no small degree the import of these cattle.

3. About  $1\frac{1}{2}$  lakhs of acres of 'open' forests are available for the grazing of 80,000 cattle, which works out to less than 2 acres per head which is the recognized minimum required. The local demand for grass from closed forests is also very heavy and with due regard to the local and district requirements in this connection, 25,000 acres is the maximum area available for reservation for the proposed paper mill. Taking 1,500 lbs. as the average output per acre in normal years in this locality 25,000 acres should yield about 16,000 tons of grass or 1,000 tons in excess of the company's requirements. Of the 25,000 acres that can be reserved for the company it is proposed to allot 10,000 acres in the Shirpur East Range and 15,000 in Shirpur West Range and as far as possible to meet the wishes of the company in the allocation of plots provided that no areas will be reserved within four miles on either side of the Bombay-Agra Road or within a radius of any existing established cattle 'Padav.' Areas cannot be set apart at the foot of the Satpuras where owing to the existence of a large number of revenue villages the grazing incidence is very heavy indeed. Except for a few Bhil villages and 'In Forest' settlements the whole of this tract is more or less depopulated, hence unless labour is imported from outside the company will be faced with real difficulties with regard to labour supply. If the company wish to depend on the scanty labour now available in these hills, forest works will suffer in consequence and this will have to be guarded against by the insertion of a clause in the agreement that no 'In Forest' settlers are to be engaged by them without the written permission of the Divisional Forest Officer.

4. As regards the rates for grass to be cut by the company, the present rate, viz., Re. 0-4-0 per cart now charged to the privileged public is totally out of date and the question of raising it to Re. 1-0-0 per cart is now under consideration. For the present there is no objection to fixing the rate for the company on a sliding scale provided Re. 1 per cart is taken as the maximum rate and imposed when the profits reach 15 per cent. and be reduced in proportion for lower profits—as. 8 per cart being the minimum charge.

5. Among other conditions to be entered into by the company it is suggested that—

(a) the company be prohibited from—

- (i) selling grass to the public from the area allotted to them;
- (ii) interfering with the working of coupes in the allocated areas;

(b) as soon as grass cutting has been completed the area should be made available for grazing under control of the Forest Department;

(c) the company should be held responsible for fires and other injury to tree growth within the allocated area.

If they wish that the proposed area should be exclusively reserved for them and that other persons should be forbidden to cut grass in their reserved plots, they will have to entertain a staff of watchers, otherwise there will be no end of trouble."

Memorandum to the Superintending Engineer, C. D., No. M.-3233, Public Works Department, dated the 2nd March 1922:—

"Forwarded to the Superintending Engineer, Central Division, for favour of early report in consultation with the Superintending Engineer, Deccan Irrigation Division, as to whether the water of the river Tapti applied for by the applicants is required or is likely to be required for irrigation purposes.

To be returned through the Superintending Engineer, Deccan Irrigation Division."

Memorandum from the Superintending Engineer, C. D., No. 2442, dated the 30th March 1922:—

"Returned with compliments to the Secretary to Government, Public Works Department, Bombay.

2. The water of the river Tapti is not required or likely to be required for irrigation purposes within the limits of the West Khandesh District."

Memorandum from the Superintending Engineer, Deccan Irrigation Division, No. 2208, dated the 18th April 1922:—

"Forwarded with compliments.

2. There is an irrigation scheme proposed for the Tapti River with a weir or a dam at Hatnur or Susti (East Khandesh District) with a Right Bank Canal ending near Shirpur (West Khandesh District).

3. The proposed paper mill is to be located near Shirpur and it would thus not affect the irrigation scheme. But when the latter is carried out, the non-monsoon flow of the river will be intercepted by the weir or dam at Hatnur or Susti and the mill near Shirpur will only get whatever water percolates into the river between the Dam or Weir and Shirpur.

4. Attention is invited to pages 19, 20, 74 to 76 of the Report on the Survey for Protective Irrigation Works in the Deccan by Mr. Beale and its Review by Mr. Hill, 1909."

Memorandum to the Director of Industries, No. 4031-D., Revenue Department, dated the 12th May 1922.

Memorandum from the Director of Industries, No. B.-166, dated the 10th August 1922.

Memorandum to the Director of Industries, No. 4031-D., Revenue Department, dated the 14th November 1922.

Memorandum from the Director of Industries, No. B.-223, dated the 5th December 1922.

Letter to Messrs. B. Sitaram and Son, No. 4031-D., Revenue Department, dated the 23rd March 1923.

Letter from Messrs. B. Sitaram and Son, dated the 25th April 1923:—

"In reply to your proposal regarding the question of royalty and with reference to our interview at Mahabaleshwar on the 16th instant, we further beg to inform that we agree to pay to Government the royalty of 40 per cent. on the surplus profits after setting aside 10 per cent. on the capital of the Company from the nett profits that shall be determined after deducting the necessary charges as follows:—

- (a) Collection and Transport charges on the raw material, cost of the chemicals required, manufacturing charges, interest on the borrowed money (if any) insurance charges, income-tax, administrative charges, depreciation of the machinery and building, and selling charges. In accepting these terms of the Government we hope we shall be exempted from paying any royalty on water-

supply also. We also agree to accept Government proposal to have one Government Nominee on the Board of Directors. The amount of royalty to be thus fixed shall be determined by a certificate from a firm of Accountants approved by Government.

Now that this question of royalty has been fixed we hope you will please prepare a Draft of Terms of Concessions in usual legal language sending a copy of same to us at an early date so that we can entrust same to our Solicitors before the final agreement is prepared."

Letter to Messrs. B. Sitaram and Son, No. 4031-D., Revenue Department, dated the 4th May 1923:--

"I am directed by the Honourable Mr. C. V. Mehta, Minister for Forests and Excise, to acknowledge the receipt of your letter, dated 25th April 1923, and to state that the draft terms of concessions will be taken in hand. As regards the royalty on water, I am to say that the amount to be recovered is nominal and that the clause about it must be retained in order to secure the rights of Government."

Memorandum to Remembrancer of Legal Affairs, No. 4031-D., Revenue Department, dated the 8th June 1923.

Memorandum from Remembrancer of Legal Affairs, No. 1234, dated the 11th July 1923: -

"The requisite draft agreement is appended.

2. It should be engrossed on a stamp paper of the value of rupee one. It does not appear to be compulsorily registrable under section 17 of the Indian Registration Act, 1908; and it should be executed on behalf of the firm by all the partners constituting the firm. The description of the firm in the preamble to the deed should be verified.

3. The addition to clause 3 (11) (cancellation clause) is suggested for approval, as it would appear that a penalty of Rs. 100 might not suffice to restrain the firm from a deliberate breach of some of the conditions, *e.g.*, it might be profitable for the firm to sell the whole of the grass in spite of a penalty of Rs. 100. It would appear that conditions 1 and 4 are the only conditions for breach of which the firm should be liable to forfeit the concession, but as this is a matter for the Department concerned to decide, the space for the entry of the conditions breach of which involves cancellation has been left blank and should be filled in before the agreement is submitted to the firm."

Letter to Messrs. B. Sitaram and Son, No. 4426-D., dated the 6th August 1923:--

"With reference to the correspondence ending with Government letter No. 4031-D., Revenue Department, dated the 6th July 1923, I am directed by the Government of Bombay (Transferred Departments) to forward herewith the draft agreement approved by them in connection with the concessions to be given to you in the matter of your scheme for erecting a paper mill in the West Khandesh District and to enquire whether you agree to the terms of the agreement. I am also to request that the description of your firm in the preamble to the deed may be verified and that the name of the exact place where water will be pumped up from the river Tapti may be communicated to Government for insertion in paragraph 2 (2) of the agreement. I am to add that the agreement, if approved, will have to be signed by all the partners of the firm at the time of its execution."

Letter from Messrs. B. Sitaram and Son, No. 931, dated the 19th September 1923:—

"We beg to acknowledge with thanks receipt of your letter No. 4426-D. of 6th August last, together with a draft Agreement approved by Government in connection with the concessions to be given to us for the above scheme.

2. We submitted the draft agreement to our legal advisers for opinion, and have now to return the same with the changes suggested by our Solicitors

shown in parallel columns for the final approval of Government. It will be observed that most of the changes suggested are changes not involving new principle, but are only of drafting; it is hoped that they will be acceptable to Government without lengthy discussion between various Departments, and that the proposed Agreement would be executed without much delay.

3. We desire that the Agreement with Government should be executed not under the present name of our Firm as Messrs. B. Sitaram and Son, but under the name as Messrs. Kamat and Sons. We beg to point out that the individuals constituting at present Messrs. B. Sitaram and Son are identical with the individuals who for the present will constitute Messrs. Kamat and Sons, namely, Mr. B. S. Kamat and Mr. A. B. Kamat; the change in the name is desired by us, as we think it will be more advantageous for the purpose of floating any joint stock company for this scheme.

4. The exact place where water from the river Tapti will be pumped up will be communicated to you shortly."

**RESOLUTION.**--Government are pleased to permit Messrs. Kamat and Sons to erect a paper mill in the West Khandesh District on the terms laid down in the agreement appended to this resolution. The Director of Industries should be requested to forward the agreement to Messrs. Kamat and Sons for engrossment and execution on a stamp paper of the value of rupee one and to send it to the Conservator of Forests, Central Circle, for execution on behalf of Government. A copy of the executed agreement should be forwarded to Government for record. Messrs. Kamat and Sons should be asked to insert before execution in paragraph 2 (2) of the agreement in consultation with the Collector of West Khandesh and the Executive Engineer, West Khandesh District, the name of the exact place where water will be pumped up from the river Tapti and to arrange for the execution of the agreement on behalf of the firm by all the partners constituting the firm.

By order of the Government of Bombay,

S. N. ZIMAN,

*Deputy Secretary to Government.*

G. R. No. 4426, G. D., dated the 12th November 1923.

To

The Director of Industries.  
 The Commissioner, C. D. *मुकामत नयन*  
 The Collector of West Khandesh.  
 The Collector of East Khandesh.  
 The Remembrancer of Legal Affairs.  
 The Chief Conservator of Forests, Bombay Presidency.  
 The Conservator of Forests, Central Circle.  
 The Superintending Engineer, C. D.  
 The Superintending Engineer, Deccan Irrigation Division.  
 The Executive Engineer, West Khandesh District.  
 The Executive Engineer, East Khandesh District.  
 The Accountant General.  
 The Revenue Department.  
 The Public Works Department.  
 The Finance Department.

No. of 1923.

Copy forwarded for information and guidance to

*Accompaniment to Government Resolution, General Department, No. 4426, dated the 12th November 1923.*

This AGREEMENT made the day of one thousand nine hundred and twenty Between the Secretary of State for India in

Council (hereinafter referred to as "Secretary of State," which expression shall, unless excluded by, or repugnant to, the context, include his successors in Office and assigns) of the one part, and Messrs. Kamat and Sons, a firm consisting of the following partners, namely (1) Mr. Balkrishna Sitaram Kamat and (2) Mr. Anantrao Balkrishna Kamat of Ganeshkhind Road, Poona, having its office at 41, Hummum Street, Fort, Bombay (hereinafter referred to as "The Firm" which expression shall include any future partner or partners of the said Firm and the survivor or survivors of them, their executors, administrators and assigns, unless such interpretation shall be excluded by or be repugnant to the context) of the other part.

WHEREAS the Firm has applied to the Government of Bombay for certain concessions hereinafter mentioned in connection with the erection of a Paper Mill in the District of West Khandesh and the Government of Bombay has agreed to grant such concessions on the conditions hereinafter set forth;

2. Now this Indenture witnesseth that in consideration of the royalties, covenants and conditions hereinafter reserved and contained and on the part of the Firm to be respectively paid, performed and observed, the Secretary of State doth hereby grant to the Firm such concessions as are herein contained. And it is hereby agreed by and between the parties hereto as follows, that is to say:—

- (1) The Secretary of State shall reserve 25,000 (Twenty-Five Thousand) acres of Forest land (hereinafter referred to as the "Allotted Area") in the North Khandesh Forest Division for the supply of grass for the Firm. In reserving such land for the Firm the Secretary of State shall as far as possible meet the wishes of the Firm in the allocation of plots but no land shall be reserved within four miles on either side of the Bombay-Agra Road or within a radius of two miles of any existing cattle padav.
- (2) The Secretary of State shall allow the Firm to pump water from the River Tapi at \_\_\_\_\_ for the manufacture of paper and other auxiliary and subsidiary processes and works carried on there in connection with such manufacture and for the workers housed or employed by the Firm, on payment of a Royalty of Rs. 100 (one hundred) per annum. Such royalty shall be subject to revision after 30 years; but any increase in the rate thereof at each such revision shall not exceed 100 per cent. Nothing herein contained shall be deemed to guarantee to the Firm any specific supply of water and Secretary of State will not be responsible for any deficiency in the supply of water that may occur owing to the projected irrigation works at Hutnur and Sustri or any other irrigation project that may hereafter be undertaken by Government or from any other cause whatever; provided however, that in carrying out any such irrigation works Government will, as far as possible, give due consideration to the reasonable requirements of the Firm, but the decision of Government as to what is due consideration shall be final.
- (3) At the discretion of the Conservator of Forests, Central Circle (hereinafter called "The Conservator") the Firm may be allowed to cut grass in forest outside the allotted area on the same terms as in the allotted area.

3. And the Firm hereby agrees to make the following payments and to perform and observe the following conditions and covenants, namely:—

- (1) The Firm shall pay to the Secretary of State at the Office of the Collector of \_\_\_\_\_ or at such other place as the Secretary of State may direct in each year within 60 days of the date on which the company's accounts are made up under the Companies Act in each year a royalty calculated as follows:—

To the cost of production in each year shall be added ten per cent. of the paid up capital entitled to dividend in the year and 40 per cent. of the difference between the amount thus calculated and the total receipts on the revenue side of the account shall be royalty for that year.

*Note.*—The expression "cost of production" shall include collecting costs, manufacturing costs, selling charges, administrative expenses inclusive of the commission of the Managing Agents of a Company to which these concessions may be assigned by the Firm, not exceeding 10 per cent. of the gross profits, interest on borrowed money, and depreciation on the scale allowed by the Income Tax Authorities for Paper Mills but shall not include income-tax on profits. The certificate of a Firm of Accountants approved by the Secretary of State as to the amount of royalty payable in any year will be accepted by the Secretary of State as final.

- (2) The Board of management of the firm shall include one member nominated by the Secretary of State and the partnership deed of the Firm shall make due provision for such nomination.
- (3) The Firm shall not disturb any existing or future rights of individuals or communities and the decision of the Secretary of State as to what constitutes a disturbance of such rights shall be final.
- (4) Except with the previous permission in writing of the Divisional Forest Officer, West Khandesh (hereinafter referred to as "the Divisional Forest Officer"); the Firm, its agents or servants shall not sell to the public grass cut in or outside the allotted area.
- (5) The Firm shall not, without the written permission of the Divisional Forest Officer, employ in any of its operations any in-forest settlers.
- (6) The Firm shall not conduct any operations in the allotted area which in the opinion of the Conservator are likely to interfere with the protection or working of the forest. Nothing herein contained shall apply to the cutting, collecting, baling, pressing and removing of grass.
- (7) The Firm, its servants and Agents, shall not allow any fire within the allotted area except at such places and under such restrictions as are prescribed by the Conservator. The Firm, its servants and agents shall abstain from felling, lopping, injuring or permitting to be felled, lopped or injured by any persons, any tree, or other forest growth other than grass within the boundaries of the allotted area.
- (8) On the demand of the Collector of West Khandesh the Firm shall throw open to grazing the allotted area or any portion of it after grass cutting operations for the reason in such allotted area or portion thereof have been completed.
- (9) The Firm shall make arrangements for the disposal of the effluent from the paper factory to the satisfaction of Government.
- (10) The Firm shall not use Motor lorries, tractors, or similar heavy vehicles for the transport of grass, paper or other materials without the previous permission of the Collector of West Khandesh. In case the decision of the Collector as to what is a heavy vehicle is disputed by the Firm the decision of Government thereon shall be final.
- (11) If the Firm commits a breach of any of the conditions of this agreement it shall be liable to pay to the Secretary of State a penalty of Rs. 100 (one hundred) or such smaller sum as may be determined by the Divisional Forest Officer for each individual breach of the conditions. And in the event of the Firm com-

mitting a breach of any of the conditions 1 and 4 of this agreement the Secretary of State shall be at liberty to cancel the concessions hereby granted and the Firm shall not be entitled to any compensation for any loss caused by reason of such cancellation.

4. Provided always and it is hereby further agreed and declared that save as otherwise herein provided the concession hereby granted to the Firm will remain in force for a period of 30 years from the date of the execution of these presents. On the expiration of the said period of 30 years the concessions may be renewed for a second term of 30 years on such conditions regarding royalty, etc., and subject to the provisions of clause 2 (2) as may then be agreed upon between the parties hereto or in default of such agreement the royalty shall continue to be paid on the same basis as is provided in clause 3 (1) of this agreement.

5. Provided further that—

(1) this agreement may be cancelled at any time after three years from the date of execution of these presents if the Secretary of State considers that the work done by the Firm has been insufficient towards establishing a paper-pulp or paper industry and the decision of the Government of Bombay as to whether the work done by the Firm is sufficient or insufficient for the purpose of this clause shall be final.

(2) The firm shall be at liberty to assign the benefits and liabilities of the Firm under this agreement including the option of renewal referred to in clause 4 hereinbefore mentioned with the consent in writing of the Secretary of State provided that in the case of such assignment being made to a joint stock Company the Secretary of State shall have a right to nominate one Director on the Board of Directors of such Company and the Articles of Association of such Company shall make due provision for the exercise of that right by the Secretary of State. The Firm or any Company to which the said concessions and the benefit of this agreement may be granted may also with the consent of the Secretary of State in writing assign the same to any person or persons, Firm or Company.

IN WITNESS WHEREOF

Conservator of Forests, Central Circle, hath by the order of the Government of Bombay set his hand and the seal of his office for and on behalf of the Secretary of State for India in Council and

and \_\_\_\_\_ partners of the said firm have hereunto set their hands the day and year first above written.

Signed sealed and delivered by

Conservator of Forests, Central Circle, in the presence of—

Signed by the above named partners of Messrs. Kamat and Sons in the presence of—

## Enclosure IV.

## Statement of Paper Mills in the Bombay Presidency for the Calendar year 1923.

Name of Mill.	Locality.	When established.	CAPITAL			Daily average no. of persons employed.	PRODUCTION.		Description of paper manufactured.	Raw material from which made.	REMARKS.
			Authorised.	Paid up.	Debentures.		Quantity Tons.	Value Rs.			
1. Girgaum paper Mill.	Bombay (Girgaum).	1862	Private.	concern.		54	180 T. 4 Cwt.	1,25,000	Coarse brown packing paper.	Pulp of rags and gunny.	
2. The D. Pudumjee Paper Mills.	Bombay, Lamington Road, Byculla.	1913	Private.	concern.		49	620 T.	3,07,000	White writing, coloured and brown paper.	Rags, gunny, waste paper and chemical pulp.	
3. The Reay Paper Mills.	Poona.	5th JULY, 1885.	5,00,000	4,99,135	NIL.	141	427 T. 3 Cwts.	3,41,651	Printings, Laid, Hadam, Acire and Coloured mechanical brown pulps.	"	

OFFICE OF THE DIRECTOR OF INDUSTRIES,  
 Factory Department,  
 Old Customs House,  
 Bombay, 26th March 1924.

Sd. H. F. KNIGHT,  
 Acting Director of Industries.



## No. 10.

**Government of Bihar and Orissa.**

*Letter, dated the 29th May 1924, from the Government of Bihar and Orissa, forwarding replies to questionnaire No. II.*

I am directed to refer to your letter No. 352, dated the 1st May 1924, on the subject noted above.

2. This province produces raw material for the manufacture in two forms, sabai grass and bamboo. As for the sabai grass, most of it is already being consumed. The Titaghur Mills take their supply from the Santal Parganas and the Bengal Paper Mills from the Singhbhum District. There are no other large sources of supply, but there are a number of places where sabai grass is produced in smaller quantities, and it is believed that a great part of this finds its way through small dealers either to the two mills mentioned or to mills in the United Provinces.

3. As regards bamboo, there are three localities in which there is reason to believe that suitable bamboo can be found in sufficient quantities and under favourable conditions. These are in the Sambalpur District, at a spot on the Brahmini river in Orissa, and on the Mahanadi river in Angul. The last proposition has been worked out in detail by Mr. Nicholson, Deputy Conservator of Forests, and Mr. Raitt of the Forest Research Institute, Dehra Dun. I am to forward a copy of Mr. Nicholson's report on the bamboo forests of the lower Mahanadi basin and Mr. Raitt's report on a project for manufacturing paper pulp at Cuttack.

4. No paper mill exists in the province and no plant for the pulping of bamboo has yet been erected, nor has any concession so far been granted for it. The pamphlets forwarded with this letter furnish a complete answer to your questions as to the research made into the matter and the conclusions drawn therefrom. The Local Government understand that there is no further information to be added to these reports except that since the publication of Mr. Raitt's Bulletin suitable lime has been located somewhere in Orissa, and that the estimate for this commodity in paragraph 8 of the bulletin can be considerably reduced. This, however, has not been confirmed, and in any case the price of lime is not a controlling factor in the problem. At present the Local Government are awaiting the results of some large scale experiments on the pulping of bamboo now being carried out at Dehra Dun. Maps of the Mahanadi source of supply and the suggested site of the Cuttack factory will be found in the reports, while as for the location of lime, Mr. Raitt could only suggest Bilaspur in the Central Provinces and Dehra-on-Sone in the Shahabad District of this province, both some hundreds of miles distant by rail, and it seems superfluous to illustrate this fact with a map. I am to note that, while one project only has been submitted to detailed examination, there is reason to believe that the prospects of pulp making in Orissa are not limited to this, but pending further investigation nothing definite can be said about other suggested schemes.

5. There remain the following questions to be answered:—

- (a) what conditions are likely to govern the grant of concessions for extracting the raw material in future;
- (b) local sentiment as regards such concessions;
- (c) the local demand for machine-made paper.

6. Mr. Nicholson has examined some aspects of the royalty question in the additional appendices to his report, and I am to say that these additional appendices have not been made available to the public but have up till now been treated as confidential. The other pamphlets have been published, and the whole of the information available to Government is at the disposal of those interested in the industry. The Local Government do not propose to advertise an offer but to wait until some company which desires a concession approaches them. I am to say, however, that Government are willing to grant terms which would encourage a pioneer industry in Orissa, and

are disposed on the whole to think that a royalty which varied with the profits of the undertaking, or a system by which Government shared to some extent the risks and gains of the promoter would be preferable to a flat rate. As a combination of both systems a royalty of 4 annas per 100 bamboos, and half share in the profits of the company in excess of 10 per cent. has been tentatively suggested. It may, however, be decided to demand a sliding scale of royalty linked to the market price of the finished product, and the terms, of course, would have to vary according as the promoters were interested in paper mills or an independent undertaking. In any case it is realised that the lease would have to be for a long period in order to attract the capital required. I am, however, to point out that no terms have as yet been formulated, and as already observed, the Local Government prefer to await an offer rather than to make one themselves.

7. These certainly is local sentiment in Orissa against the grant of such concessions to persons outside, except on the understanding that the capitalists of Orissa should have an opportunity of coming into the venture on favourable terms. A similar tendency has been shown in connection with the development of the mineral resources of the province, and other large commercial undertakings. It should, however, not be difficult to placate this feeling. The persons among whom it exists are sufficiently educated to know that it is better that the natural resources of the country should be developed by foreign capital than not developed at all; and that owing to the highly technical nature of this industry, we must rely on expert advice and assistance from outside and can hardly expect to obtain this if we exclude outside capital altogether. If any company is formed, it should be possible to arrange that a large block of the shares be offered in the first instance in Orissa, and this, together with the advantage of training young men in an industry, should reconcile the objectors to the grant of such a concession even to an European promoter. As regards local needs, I am to say that the stock of bamboos in Angul is larger than any mill could consume, and there would be no difficulty in providing by suitable rules against any restriction of the privileges of the villagers to take bamboos from the forests for their domestic needs.

8. The net imports of paper and paste-board into Bihar and Orissa, for the year 1921-22 (the latest for which figures are available) were 3,400 tons valued at about Rs. 15,00,000.

### No. 11.

#### Government of the Central Provinces.

*Letter, dated 1st June 1924, from the Government of the Central Provinces, forwarding replies to questionnaire No. 11.*

With reference to your letter No. 352, dated the 1st May 1924, I am directed to forward for the information of the Board a copy of a Bulletin No. 1 issued by the Department of Industries, Central Provinces, which contains all the available information concerning existing conditions as regards the manufacture of machine-made paper and paper pulp and the prospects of the future development of the industry in this province. The paper and pulp plant alluded to in paragraph 3 of the Bulletin has since been installed at the Imperial Forest Research Institute, Dehra Dun, and at the request of the Institute the Agriculture Department supplied a small quantity of cotton stalks to the Institute for the purposes of experiments. The result of these experiments is awaited, but in the meantime the Forest Economist has advised the Local Government not to encourage exploitation of any new material on a commercial basis.

2. With reference to paragraph 3 of your letter under reply, I am to give the following information on the various points raised therein:

#### *Point A.*

(1) and (2). The necessary information will be found in the Bulletin.

(3) to (5) No detailed information has so far been collected.

(6) (a) There would be no difficulty in selecting a suitable factory site adjacent to coal, limestone and water.

(b) No.

*Point B.*

(1) (a). Does not arise.

(b) No.

(c) The question of conditions to govern the grant of concessions in future has not been considered yet.

(2) The Local Government is not aware of any local sentiment against the grant of such concessions.

*Point C.*

The cost of collection and transport would be prohibitive. The exact cost has not been worked out.

*Point D.*

About 800 tons per annum.

*Point E.*

Vide information given in the Bulletin.

**No. 12**

**Government of Burma.**

*Letter, dated 2nd June 1924, from the Government of Burma, forwarding replies to questionnaire No. II.*

In reply to your letter No. 352, dated the 1st May 1924, on the subject noted above, I am directed to say that no research of the nature referred to in paragraph 3A thereof was made by the Industries Department in Burma, but further enquiries in regard to the suitability of certain areas in Burma for the manufacture of paper

1. Report on the inspection of bamboo areas in the Pegu Division by Mr. R. S. Pearson.

2. Note on certain bamboo areas in Burma by Mr. W. Raitt.

3. Note on bamboo areas suitable for paper pulp manufacture in the Thayetmyo District by Mr. J. D. Hamilton.

pulp from bamboos were conducted by Messrs. R. S. Pearson, Forest Economist, W. Raitt, Cellulose Expert, and J. D. Hamilton, Extra Assistant Conservator of Forests, as detailed on the margin, and I am to forward for the information of the Tariff Board copies of their

reports\* which furnish to a certain extent the information required. As there is no paper industry carried on in Burma at present, this Government is not in a position to supplement the information given in these reports.

2. Concessions for the extraction of bamboos for conversion into paper

1. Messrs. Jamal Brothers over certain Compartments in the Pozaunglaung, Taunggyo, Yonbin, Ninbin, and Yoni Reserves in the Pymawma Forest Division from 1st January 1920.

2. Messrs. Hockley and Manning Limited, over the Kalinaung Reserve and part of the Heinze Reserve in the South Tensassarin Forest Division from 1st July 1920.

3. Messrs. H. V. Low & Co., over the Catchment area of the Lemo River lying within the Akyab District and the Hill District of Arakan from 1st April 1920.

4. Messrs. F. W. Heilgers & Co., over certain Compartments in the Kalein, Letpan, Kodat, North and South Zamayi Forest Reserves in the Pegu Forest Division from 1st January 1920.

have, however, been granted to the firms cited on the margin in terms of the Standard Form of Agreement, a copy of which is attached, for a period of 21 years each, over the areas specified; but for one reason or another none of these firms has as yet begun operations; two of them have merely been content to obtain extensions of time on payment of a consideration of Rs. 5,000 a year, while Messrs. Heilgers have withdrawn from their agreement. Messrs. Jamal Brothers had practically completed the erection of a mill at Kyidaunggan in the

\* Below attached.

Yamethin District when it was burnt down in March 1922 and its re-erection has not yet been taken in hand. But the site selected by this firm is not that recommended by Mr. Pearson and has been condemned by Mr. Raitt after visiting the locality.

3. I am to add that the rate of royalty charged to the above concessionnaires is that laid down in clause 9 of the Standard Form of Agreement. The question of local sentiment, however, hardly arises in Burma in view of the provision made in clause 5 (f) of the Standard Form of Agreement, for the exercise by residents in the concession area of the right to raise food and other crops and to extract bamboos for domestic and agricultural purposes.

#### Enclosure I.

*Report, dated the 5th March 1918, on the Zamayi Bamboo Areas of the Pegu Division, Tenasserim Circle, Burma, by R. S. Pearson, Forest Economist.*

##### (1) General.

The object in visiting these forests was to determine the relative merits of the Pegu and Thonze Catchment areas, with reference to their suitability for the extraction of bamboos for paper pulp. The writer inspected the Thonze and Okan areas in 1911, while the present report is based on an inspection carried out in February, by Mr. C. K. Hargreave, Deputy Conservator of Forests, Pegu Division, Mr. J. Thomson, representing Messrs. F. W. Heilgers of Calcutta and the writer, who after inspecting a factory site near Pegu proceeded up the Pegu river, making camps at Tandawgyi, Tamabin, Zaungtu and Dainghmu.

##### (2) Name and Situation.

The forests with which this scheme is concerned are situated in the drainage of the Pegu river, which in its upper reaches is known as the Zamayi. This river drains down the eastern slopes of the Pegu Yomas, passing through Reserved Forests for a distance of about 80 miles to Zaungtu and from there winds through level country over a course of about 45 to Pegu and thence joins the Rangoon river just below that city.

The State Forests are divided into reserves; as far as this scheme is concerned the following are to be considered:—

- |   |   |            |
|---|---|------------|
| (1) Kalein Reserve                      | } | East Bank. |
| (2) South Zamayi Reserve                |   |            |
| (3) Aungmya Reserve                     | } | West Bank. |
| (4) Letpan Reserve                      |   |            |
| (5) Kadat Reserve,                      |   |            |
| and                                     |   |            |
| (6) North Zamayi Reserve on both banks. |   |            |

##### (3) Description of the Forests.

On the East Bank, and to the South, the forests are situated on slightly undulating ground, which as one goes North becomes somewhat broken and hilly. These areas are well drained by the Kodugwe, Daw Tedaw and Sinzwi Chaungs, large tributaries of the Pegu river.

On the West bank the country is more hilly and on going West the forests run up to the crest of the Yomas. The tributaries on this side of the river are the Letpan, Aungmya, Thuta, Linzin, Kyonwi, Kadat, Tukaw and Kwekaw.

The forests on both banks of the main river are Moist Deciduous in character, which merge into belts of ever-green along some of the tributaries, on the crests of the Pegu Yomas to the West, and the lower lying hills in the upper reaches of the Kodagwe river. Throughout the Moist Deciduous forests bamboo growth is nearly continuous.

(4) *Area of forests covered with Bamboo.*

It must be clearly understood that with the exception of the above-mentioned evergreen belts, the whole of these forests contain a heavy growth of bamboos, and that it is only with those areas which are easily accessible and from which bamboos can be extracted by floating, that this report is concerned.

Of the forests on the East bank, the only Reserves with which we are concerned are:—

Name of Reserve.	Area in acres.
(1) Kalein Reserve . . . . .	10,816
(2) S. Zamayi Reserve . . . . .	1,48,544
TOTAL . . . . .	1,59,360

*On the West Bank.*

(1) Aungmya Reserve . . . . .	12,352
(2) Lctpan Reserve . . . . .	11,456
(3) Kadat Reserve . . . . .	50,467
TOTAL . . . . .	74,275
GRAND TOTAL . . . . .	2,33,635

Bamboos can be extracted from practically the whole of this area, though some of the compartments are a considerable distance from the floating streams, and so unprofitable to work under present conditions. The area from which extraction is easy amounts to 66,310 acres, either situated on both sides of the main river or up the main tributaries.

(5) *Species of Bamboos and mode of growth.*

The prevailing bamboo is *Kyathaung*, *Bambusa polymorpha*, the next most common being *Tinwa cephalostachyum pergracile*, while Myin, *Dendrocalamus strictus* occurs on the ridges. Other species are also present but not in commercial quantities—the *Kyathaung* bamboos are very large and form mature clumps, the growth in many places being heavier and larger than that seen in the Thonze Area; the general idea is that they will flower in the near future, but on this point no reliable data are available. The *Tinwa* commenced flowering anything up to 5 years ago, though the majority flowered 2 and 3 years ago. It has come up like grass, being at the present time from 1 foot to 8 feet high, according to its age. Judging from the state of young bamboo crops in process of formation in this and other localities, it is probable that *Tinwa* will commence to form definite clumps in its 5th to 6th year from the time of germination. The fact that *Tinwa* has flowered and re-generated profusely is the saving clause in the situation as far as a sustained annual supply of raw material in the near future is concerned; the other important factor being that the *Kyathaung* when it does flower will, if it follows the mode of flowering of other species of bamboos, not complete the process in one year, but will take several years to do so.

(6) *Outturn.*

The number of bamboos annually extracted down the Pegu river is very large, amounting to 2,333,895 during the season of 1916-17. Of this number the greater portion were taken out for sale or barter, and the rest by right-holders.

In connection with former enquiries, the results of which have been published, in the Indian Forest Records, Volume IV, Part V of 1916, complete enumerations of bamboo areas were carried out with a view of ascertaining the yield of air-dry bamboos per acre. The figures for the Thonze-Okkan and Hlaing Yoma Reserves, which adjoin this Division on the other side of the Yomas, may be taken with safety for these forests, especially as the stock of bamboos is denser in the Pegu Catchment area than in those above mentioned.

The figure of outturn arrived at the Thonze and adjoining forests was 4.2 tons of dry nodes and internodes per acre. The area from which bamboos can be easily extracted is given elsewhere as 66,310 acres, working on a 5-year rotation this gives 13,262 acres per annum or a sustained yield of 55,700 tons of air-dry nodes and internodes per annum. This is probably an extremely conservative figure.

(7) *Possible Factory Site.*

A possible factory site was carefully inspected by all three officers near Pegu.

The site selected, is situated on the West Bank of the Pegu River. It is the highest land in the neighbourhood and protected by a bund, from the river which is 500 yards distant. It will be necessary, however, to raise the height of the land by a few feet and to put a protective bund on the north side in order to make the factory secure from floods. The cost of this will not be much.

The area is approximately 70 acres and is owned by natives. There should be no difficulty in securing the land, as the Deputy Commissioner informed us that it is available. Before finally deciding it will be advisable to prove that Artesian Well Water can be obtained. A short distance away the Ice Factory has an excellent Artesian Well drawing water from a depth of 305 feet by a 6" pipe. The supply is constant and the quality good and clear.

The river water, however, may prove to be suitable for the factory, as the tides only just reach Pegu. Samples are being taken for analyses. If it is decided to use the river water, a filtering plant will be necessary.

The site is close to the Burma Railway at the junction of the Mandalay and the Moulmein lines, and is 2 miles from Pegu Railway Station.

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NOTE.—In Appendix I, Indian Forest Records, Volume IV, Part V, nodes and internodes are counted separately, since this was published it has been found that both internodes and nodes can be utilized for paper pulp.

The advantages appear to be that—

- (1) Lime will be available from Moulmein.
- (2) Coal and chemicals can be sent to the factory for six months of the year by river, or by rail at all times. The distance is 47 miles from Rangoon by rail and 50 miles by river.
- (3) The town of Pegu is healthy and quite suitable for the Europeans to live in.

(8) *Cost of Cutting and Extraction.*

*Kyathaung* bamboos are sold in Pegu for Rs. 6 per 100 stems and Rs. 8 per 100 for selected stems; *Tinca* sell for Rs. 5 per 100 stems.

- (1) *Kyathaung* (*B. Polymorpha*)—The cost of cutting and dragging to the floating streams amounts to Rs. 41 per 1,000 stems; it costs

Rs. 5 per 1,000 to make into rafts, while the cost of rafting from the forests to Pegu amounts to Rs. 10 per 1,000 stems. Therefore, the total cost, exclusive of royalty and profit, amounts to Rs. 56 per 1,000 stems, Rs. 5-9-7 per 100 stems.

- (2) *Tinwa (C. Pergracile)*.—Cost of cutting and dragging to steam comes to Rs. 27 per 1,000 stems; cost of making up rafts Rs. 4 per 1,000 stems and cost of rafting from the forest to Pegu Rs. 10 per 1,000, a total of Rs. 41 per 1,000 stems, or Rs. 4-1-7 per 100 stems.

(9) *Cost of landing one ton of air-dry bamboo (nodes and internodes including) at the proposed factory site.*

- (1) *Kyathaung (B. Polymorpha)*.—The weight of one dry *Kyathaung* amounts to 17.7 lbs. (see Appendix I, Indian Forest Records, Volume IV, Part V), therefore it requires 127 bamboos to make one ton of air-dry bamboos, both nodes and internodes included; the cost per 100 is Rs. 5-8-7, therefore, the cost per ton of air-dried *Kyathaung* bamboo, landed at the factory, amounts to Rs. 7-1-9, exclusive of royalty and profit to contractors, which would bring the figure up to in the neighbourhood of Rs. 8-8-0 per ton.

- (2) *Tinwa (C. Pergracile)*.—The weight of one dry *Tinwa* amounts 8.7 lbs., therefore it requires 257 stems to make a ton of air-dried bamboos. The cost of cutting and floating 100 stems amounts to Rs. 4-1-7, therefore it cost Rs. 10-9-0 to land a ton of air-dried nodes and internodes at the factory, exclusive of royalty and profit to the contractor, which would bring the figure up to Rs. 12-0-0 per ton.

(10) *Lines of Export.*

The chief line of export for the raw material is the Pegu River, with its several tributaries, the names of which have been mentioned elsewhere. It is an excellent floating stream as far up as the Kyauk-sa-ga Gorges, some 64 miles from Pegu and therefore 36 miles from the edge of the reserve. Large bamboo rafts are floated to downstream from below these gorges and also extensive floating is carried on down several of the tributaries to the main stream. The river is 150 to 200 yards broad at Pegu and over 100 yards broad from where floating commences in the forests. Bamboo rafts containing upwards to 10,000 bamboos are brought down to Pegu throughout the rains and smaller rafts of upwards to 6,000 stems are floated down up to the end of March. The floating season therefore covers as much as 9 months, a very important factor, when considering extraction.

The main floating stream could be considerably improved at no great expense, by erecting temporary guide weirs after the cessation of the monsoon in order to concentrate the available supply of water and thus speed up floating operations from January to March.

Pegu is also served by two railway lines, one from Rangoon and the other from Moulmein, while the Pegu River leads direct to Rangoon Harbour. A steam boat service runs during the rains from Pegu to Zaungtu, that is to the edge of the forest reserves.

(11) *Labour.*

A very considerable amount of local forest labour is available, part of which is already employed on extracting bamboos, and the rest on timber work. More labour will be required as soon as the demand arises for bamboos for a pulp factory. It is thought that some of the labour will be forthcoming from the Tarrawaddy Division, from whence a considerable number of coolies come yearly for forest work. If this supply is inadequate it will be necessary to import Indian labour. The general consensus of opinion held by the

local officers is that, provided correct methods of utilizing the local contractors are applied, the bamboos will be forthcoming.

(12) *Chemicals.*

Excellent lime is available from Moulmein, with a direct line of communication to the proposed factory by rail. There is a report that brine is available from wells near Kamasee, some 7 miles from Pegu, but this point requires verification.

(13) *Miscellaneous Facts.*

No mention has been made of the bamboos which are extracted from the unclassed forests, which lie nearer Pegu than the Reserved Forest. Probably moderate quantities of bamboos would be available from these localities, though it would be unsafe to count on this supply, as considerable quantities are required by the local inhabitants.

No mention has been made of the large forest areas further up the Pegu River, and which comprise the North Zamayi Reserve. Very large supplies of bamboos are available from this area, but as ample supplies can be obtained from lower down the river it is not at present necessary to take this area into consideration.

(14) *The relative merits of the Thonze-Okkan area and that of the Pegu Division.*

So many factors have to be taken into consideration when comparing the relative merits of two areas, that only those of primary importance can be considered.

- (1) As far as the quantity of bamboo is concerned, both areas can yield more than a factory of 10,000 tons per annum of pulp would require, so that in this respect they are equal.
- (2) The lead by river in the case of Thonze-Okkan area is 13 miles shorter than in the case in Pegu, on the other hand, there is no comparison between the floating streams, as the Pegu River is infinitely the best for floating bamboo rafts, while once the bamboos are made up into rafts, the distance they have to be floated out has little effect on the cost of extraction. As a matter of fact the cost of extraction from both areas is very much the same.
- (3) Probably the most important point in favour of the Pegu area is that floating can be carried on until the end of March with the help of dragging whereas it has to stop by the end of January in the Thonze area.
- (4) The labour question is similar in both Districts and therefore in this respect the areas are equal.
- (5) The other important factor to be taken into consideration is that of a factory site. In the case of the Thonze-Okkan areas, the proposed site is either where the Thonze cuts the railway or near Insein. Both these places present difficulties, either owing to the fact that suitable land is difficult to obtain or due to inundations. A site just outside Pegu is proposed, between the junction of two main lines and close to the river, which the Deputy Commissioner thinks there will be no difficulty in procuring, and which, after a small amount has been spent on making a bund and possibly after slightly raising the level of the ground, presents an admirable site for a factory.
- (6) The conclusion arrived at by the writer after having carefully inspected both areas is that the Pegu area is distinctly preferable to that of the Thonze-Okkan.



Enclosure II.

**Note dated the 2nd February 1919 on certain Bamboo Areas in Burma examined with a view to their Utilization for the manufacture of Paper-pulp by William Raitt, F. C. S., Consulting Cellulose Expert to the Government of India, Forest Department.**

1. *The Kabaung area near Toungoo.*—There is plenty of bamboo but the Kabaung is a bad rafting river and it connects with the Sittang which is equally unreliable as a means of transport for pulp in boats to a port. A factory site at Sineik on the Kabaung would be satisfactory as regards water-supply and a somewhat expensive siding could connect it with the main line of railway which would have to be depended on for transport of product to Rangoon but the business will not stand the cost of rail transport. Line also is a difficulty—there is some in the hills to the east but the samples of it I have seen are poor in quality and difficult to burn and it would have to be transported in carts some 15 miles. The alternative is Zibingyi line from the Maymyo extension line and this also involves a long railway carriage. I do not think this area is of much account at present or until all the more suitable locations have been taken up.

2. *Jamal Brothers location with factory site at Kyidaunggan.*—Similar remarks as above apply to this only more so. There are no river transport facilities of any kind here. All materials will have to come in by cart or tramways and all export by rail. Fire wood is near and this is the only advantage it has. I consider this location quite hopeless.

3. *Moulmein.*—The areas on the Ataran River promise well. The river is tidal to well into the forests and the short tributary streams above tidal influences can be used for small rafts during the wet season, these being collected at the junctions with main river and sent down it in largo rafts at any time throughout the year to a factory site which could be placed well down the river for it contains fresh water at high tide for a considerable distance down. From such site the product can easily be barged to steamers at Moulmein. The transport facilities are therefore good. There is, however, some doubt about the sufficiency of bamboo. In considering this I am providing for a probable expansion of factory output from 10,000 tons per annum now to 40,000 tons in the future. The forests are not typical bamboo country. There are no large solid blocks of bamboo; it occurs in patches but these patches are frequent and I think will be found sufficient considering the large total area (178 square miles including Dali) of the reserves. Limestone exists in large amount in the rock outcrops bordering the Ataran which in several places are on the river banks. It is not, I think, of first class quality but probably good enough. Better stone can be brought if necessary from Pa-an on the Salween 40 miles up by boat at a sufficiently low cost. Fuel will be somewhat expensive about Rs. 6 per dry ton delivered at factory. It would be advisable to allot a fuel reserve to any factory operating here when the cost would probably be somewhat reduced. It is possible to import Bengal coal at a cost which may not exceed Rs. 15 at factory which is equal to about Rs. 5 per ton for wood and this makes a reserve to fall back on should wood fuel prove a difficulty in the future. Export facilities from Moulmein are good as the port is open all the year round. Local labour is available in the forests from January to April.

4. *Salween.*—I went up as far as Shwegan but no small launch could be got to go higher. Visited the Pa-an limestone quarries. From what I could learn of the bamboo on the Yonzalin tributary I do not think there is enough of it for a factory supply and there appears to be no other within reach. Considering that there is a certain amount of doubt about the Ataran supply, I think it would be wise to reserve the Yonzalin as an auxiliary area to the Ataran. The Gyauing river bamboo areas are no use. I did not

think the Sittang was worth visiting. Above the Pegu canal, which provides communication with the Irrawaddy and Rangoon it may be useful but the Sittang mouth is bad at all times of the year for navigation and impossible during the monsoon.

5. *Akyab and Kaladan River*.—Good prospects here. The river is as good if not better than the Ataran and a factory site can be got some 20 miles above Akyab where the water is fresh. Akyab is an open port all the year round. Bamboo exists in very large quantities close to tidal water on the main river and its tributaries. Its cost *per dry ton* is, however, more than on the Ataran. The species existing (*Melocanna*) is very light and since costs depend mainly on the number cut and not on their dry weight the dry ton cost works out higher than elsewhere. Still it is not too high. The short flowering cycle of this species—about 14 years I understand—introduces an element of uncertainty but against this the period of recovery is only four years and flowering is not simultaneous or general all over the division; it proceeds slowly over a period of about seven years; consequently the areas which have first flowered have reached the full crop stage before later areas commence. I think this characteristic makes it safe but it does, of course, increase the total area required by a factory. Limestone of good quality can be brought by boat from Ramree island some 60 miles down the coast from Akyab. Firewood exists in large quantities close to the proposed factory sites. Forest labour supply is good.

Enclosure III.

**Note dated the 30th April 1919 on Bamboo Area suitable for  
Paper-pulp manufacture in the Thayetmyo District by J. D.  
Hamilton, E. A. C. of Forests, Burma.**

*Locality*.—The area lies roughly between the following boundaries:—

North.—Southern watershed of the Mindon River.

South.—Thayetmyo District boundary.

East.—Irrawaddy River.

West.—Foot of Arakan-Yoma Range.

The total area may be taken to be at least 400 square miles. The bamboos are largely concentrated in the drainage of the Made Chaung and in many places come right down to the banks of the Irrawaddy River. The Made Chaung comes out at Kama, a small town on the Irrawaddy about 20 miles above Prome. The Irrawaddy Flotilla Company steamers call at Kama. A Pulp Factory would be best put up somewhere in this vicinity. But even Prome is not too far away and being at a rail-head may offer some special attractions.

*Species*.—The bamboo referred to in this note is *Dendrocalamus strictus* (Bur. Hmyinwa) sometimes called the male bamboo owing to it generally yielding more or less solid stems. But all *Hmyinwa* stems are by no means solid and when the bamboo is hollow the walls are usually very thin. But as the area in question is taken to contain sufficient solid culms to meet factory requirements it is as well to say so with an expressed knowledge of the above peculiarity.

*Supply available*.—About nine million bamboos are cut annually from this area for trade purposes, i.e., the Forest Department collects royalty on this number. It can be safely said that there would be no difficulty in procuring a further twelve million especially as the pulp trade would not trouble about the straightness of culms. As the solid stems are usually not so straight as the hollow the area really has a larger and easier supply of the former. This means of course great economy.

The weight of 18 feet long dry bamboos of average thickness I find to be 8 lbs., 280 bamboos would thus go to a ton and 12,000,000 bamboos would give 40,000 tons.

Mr. Raitt expresses a doubt as to the possibility of procuring this amount in Moulmein. The Thayemyo area is free from this doubt.

The cost of extraction of the bamboos to the factory would be about Rs. 8 per ton reckoning the dry weight. In the green or semi-green state it would be much less.

*Flowering.*—So far as I know the *Hmyinwa* bamboo does not flower in the same universal manner as other species. The flowering is sporadic, and the bamboo always seems to be in flower in patches—more so perhaps in some years than in others. Seed is thus nearly always available. So that if the intensive cutting of culms showed signs of any area being in danger of depletion it could always be resown by simply scattering seed collected from some other locality. As a safeguard it would be a much less irksome method than requiring firms to cut only a certain number of culms from each clump. A method so full of difficulties as to be hardly practicable.

*Fuel.*—Firewood is plentiful and would cost about Rs. 5 per dry ton delivered at the factory, i.e., assuming the factory would be somewhere near Kama.

In the Made valley there is also coal of much the same quality as that recently tried on the Burma Railways. This coal could to some extent be brought down on bamboo rafts. I have not examined the extent of the coal bearing area and merely mention a possibility which may prove valuable.

*Lime.*—Great quantities of lime are available from Toudaung and Peikthalin villages, a few miles below Thayemyo. It is at present manufactured at both these villages. It is derived from a Nummulitic limestone of excellent quality.

*Fresh water supply.*—The Irrawaddy River.

*Sulphuric Acid.*—There are large deposits of iron pyrites not far from Kama. That at the surface is not rich in sulphur. But being on the spot it would be worth examining.

*Facilities of Export.*—The pulp could be taken in cargo boats to Rangoon or Bassein for shipment either by the Irrawaddy Flotilla Company or private arrangement.

Enclosure IV.

## Standard Form of Agreement for the Extraction of Bamboos for Paper Pulp.

THIS AGREEMENT made this \_\_\_\_\_ between the SECRETARY OF STATE IN COUNCIL (hereinafter referred to as the Grantor) of the one part and \_\_\_\_\_ (hereinafter referred to as the Licensee) of the other part. Parties to the agreement. Grantor and Licensee. which expression shall be taken to mean and include the members for the time being of the said firm of \_\_\_\_\_ and the survivor or survivors of them except when the context otherwise requires) of the other part:

WHEREAS the Licensee is desirous of obtaining a concession from the Grantor of the exclusive right and license to fell cut and remove bamboos from certain areas in the Forest Division for the sole purpose of converting the same into paper pulp or paper.

AND WHEREAS the Grantor has agreed to grant the said concession to the Licensee subject to the restrictions terms and conditions hereinafter appearing:

NOW it is hereby agreed and declared as follows:—

1. The Licensee shall have the exclusive right and license for a term of twenty-one years from the first day of (a) subject to the restrictions terms and conditions hereinafter contained to fell and cut bamboos for the sole purpose of conversion into paper pulp or paper and remove the same from the areas in the Forest Division hereinafter described or such portion of them as may be selected as hereinafter provided.

2. During the period from the first day of (a) to the thirty-first day of (b) the Licensee shall be at liberty to exercise all the rights and powers granted by these presents in those areas in the Forest Division which are detailed in Schedule I annexed hereto and are hereinafter referred to as the concession area.

3. During the period from the first day of (c) to the thirty-first day of (d) the Licensee shall be entitled to exercise the said rights and powers only in such portion of the concession area as the Licensee may select in accordance with the provision herein contained and in such further portions as may be granted as hereinafter provided. Notice in writing of any such selection shall be given to the Secretary to the Government of Burma in the Revenue Department not later than the first day of (e) and shall be accompanied by a plan clearly showing the portions of the concession area so selected PROVIDED that the portions selected shall be limited to a total area sufficient to yield not more than 40,000 tons of pulp annually for the remainder of the term of this license.

4. During the period from the first day of (a) to the thirty-first day of (b) the Grantor undertakes not to grant any similar concessions to any other person or firm in the aforesaid areas and thereafter during the continuance of this license to give the Licensee the first refusal of any further concessions therein.

5. In regard to the concession area there will be expressly reserved and excepted.

(a) the possession and the beneficial ownership of the Grantor in the soil and all mines and minerals upon or in or under the said concession area and the right to make such use of the soil and to subject it to such operations for the purpose of the extraction of minerals or otherwise as to the Grantor may seem proper;

(b) the surface of the concession area and all grazing cultivating and other surface rights other than and except the right to cut mature bamboos suitable for the manufacture of paper pulp;

(c) the right to all trees other than trees made over to the Licensee in pursuance of the provisions of clause 13 hereof and other natural products of the soil other than bamboos;

(a) Date of commencement of agreement.

(b) Date of expiry of five years from date of commencement of agreement.

(c) Date following the date of expiry of five years from date of commencement of agreement.

(d) Date of expiry of 21 years from date of commencement of agreement.

(e) Date following the date of expiry of four years and five months from the date of commencement of agreement.

- (d) the right of the Grantor to destroy bamboos in any portion of the concession area for silvicultural purposes including the making of plantations;
- (e) the right of the Grantor or of any other person who may from time to time enter into a contract with him for the extraction of teak or other timber in the concession area to graze elephants or other animals which are employed in such extraction in such parts of the concession area as may from time to time be selected for the purpose by the Divisional Forest Officer;
- (f) the right of the Grantor to permit residents in the concession area to cut *taungyas* for the purpose of raising food and other crops and to extract such bamboos as they require for all purposes other than the manufacture of paper pulp; \*
- (g) the right of the Grantor or of any person authorized by him to extract bamboos without restriction for all purposes other than the manufacture of paper pulp.

Provided that if the area for bamboos extraction is so affected by these reservations and restrictions as to result in the reduction of the yield of bamboos to below what would be required to produce 40,000 tons of pulp annually a suitable area to be selected by the Licensee out of such areas as are at the disposal of the Grantor will be handed over to the Licensee to make up for such deficiency.

6. In extracting bamboos in the concession area the Licensee shall observe the following Rules, viz:—

- (a) The concession area shall be divided into cutting series and blocks and each block of one cutting series shall be completely worked over before work is started in another block of that series.  

Method of extracting bamboos in the concession area.
- (b) The order in which the said blocks shall be worked shall be laid down by the Divisional Forest Officer in consultation with the Licensee in a plan of operations which shall be prepared beforehand so that the whole concession area may be worked over systematically. Deviations from the plan of operations so laid down shall not be made without the previous sanction of the Divisional Forest Officer.
- (c) Maps showing the area cut over in each year shall be supplied to the Divisional Forest Officer on such date as he may fix.
- (d) The Divisional Forest Officer or any subordinate duly authorized by him shall have the right to inspect the Licensee's work to see that the conditions of working are properly carried out.
- (e) The Licensee's operations shall be confined to bamboo culms more than two years old in each clump and no first or second year's bamboo culm shall be extracted. By two years old culms is meant culms which having come into existence during one rains have passed through the next rains.
- (f) To prevent the culms of bamboos diminishing in size and deteriorating in quality the Licensee shall give each block which has been worked over a rest of four to six years before it is worked over again.
- (g) When any block which has once been worked over is worked over again the Licensee shall not extract more than half of the bamboo culms in each clump in the said block.

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\* This sub-clause will not be required if it is found possible to exclude from the concession area localities suitable and sufficient for the requirements of *taungya* culture. Such exclusions will, if made, be defined in Schedule I.

7. The Grantor if so required by the Licensee shall lease to the Licensee a suitable site to be selected by the Licensee out of such sites as are at the disposal of the Grantor within the concession area for the erection of factories store-houses sheds depôts bungalows staff-offices agencies and other buildings of a like nature *bona fide* required for the purpose of the business connected with these presents such lease to be rent free for the term of the agreement.

8. The Licensee shall erect and complete at least one factory and subsidiary buildings for the manufacture of paper pulp by the first day of (f) and such factory shall thereafter be worked for not less than 120 days in each year in the manufacture of paper pulp. From and after the expiration of seven years from the first day of (a) the Licensee shall produce an annual outturn from the said factory of at least 10,000 tons of paper pulp and from and after the expiration of fourteen years from the same date an annual outturn of at least 20,000 tons of paper pulp.

9. No rents or other payments save such as are herein expressly mentioned shall be payable by the Licensee in respect of the concession area for the term during which the same shall be held and no royalty on bamboos converted into paper pulp shall be payable for the first seven years from the day of (a) but thereafter the Licensee shall pay to the Grantor a royalty at the rate of Rs. 1 per ton on air-dry unbleached paper pulp manufactured by the Licensee or in the event of the Licensee using the paper pulp manufactured by him for the manufacture of paper on that quantity of wet paper pulp which the Grantor shall decide to be equivalent to one ton of air-dry unbleached paper pulp subject to a minimum annual payment of Rs. 10,000 during the eighth to fourteenth years inclusive and of Rs. 20,000 during the last seven years of this agreement.

10. Any duty fee or royalty which may under any law rule or notification in force for the time being have been paid by third persons on bamboos subsequently sold by them to the Licensee shall be refunded to the Licensee on satisfying the Divisional Forest Officer or other officer appointed by him in this behalf that the said duty fee or royalty has been paid and that the said bamboos have been or will be used for the manufacture or for purposes in connection with the manufacture of paper pulp in such a way as to render them unmarketable for any other purpose. If the Licensee shall not so use any bamboos after the duty fee or royalty has been refunded as aforesaid the Licensee shall repay the amount which has been refunded to him in respect thereof.

11. Subject to such restrictions as may from time to time be imposed by the Divisional Forest Officer the Licensee shall during the continuance of these presents have the right to use any lands roads or streams outside the concession area which belong to or are under the control of the Grantor for the purpose of having free ingress and egress to and from the concession area and also all such lands roads or streams within the concession area.

12. Subject to the control of the Government of Burma the Licensee shall be at liberty upon obtaining the consent of the Commissioner of the

Civil Division to make dams across streams cut canals make water-courses irrigation works roads and bridges railways and tramways and any other works useful or necessary for the purpose of the business in or upon

(f) Date following the date of expiry of two years from the date of commencement of the agreement.

(a) Date of commencement of the agreement.

the concession area and also with the like consent to widen or deepen existing creeks channels or waterways for the purposes of the said business.

13. The Grantor undertakes to reserve and allot to the Licensee subject to the exercise by third parties of such rights or privileges as have been declared or may at the time of reservation and allotment be declared to exist therein an area or areas of the nearest available reserved or unclassified forest for the extraction of bamboos brushwood and trees other than trees which are now or hereafter may be declared to be reserved in any part of Burma by any law rule or notification for the time being in force and unreserved trees of the species set out in schedule II annexed hereto and such other species as may hereafter be added by the Conservator of the Circle growing on the said area or areas in quantities sufficient to meet the fuel requirements of each factory erected under the provisions of clause 8 hereof and the domestic consumption in the houses and offices of the persons employed by the Licensee in or in connection with such factory. Provided that on all fuel extracted by him the Licensee shall pay to the Grantor royalty based on the rate from time to time current.

14. Nothing herein contained shall be deemed to relieve the Licensee his agents and servants from the duty of complying with any act of the Legislature and rules thereunder for the time being in force applying to the locality in which the concession area is situate.

15. The Licensee in conducting his operations on the concession area shall not in any way interfere with the surface of the land save and so far as may be necessary for the immediate purpose of carrying on the necessary operations in connection with the said business.

16. The Licensee shall keep full and true accounts in English of the number of bamboo culms brought into his factory or factories of the quantity of paper pulp manufactured and in process of manufacture and exported and of the quantity of fuel used and shall on the fifteenth day of each month send to the Divisional Forest Officer in such form as he may prescribe a true analysis thereof for the month immediately preceding. The royalty appearing by such statement to be due in respect of the paper pulp manufactured and the fuel used during each month shall be due and payable on or before the last day of the next succeeding month.

17. The Licensee shall allow the officers deputed in that behalf by the Conservator of the Circle to have full inspection of all the said accounts and account books and to take all such steps as in the opinion of such officers may be necessary for ascertaining by enquiries inspection and measurement or weighing the correctness of the same and of the said analysis and shall also permit the officers in that behalf appointed by the Government of Burma to inspect all works machinery and other matters connected with the operations of the said business and the Licensee shall forthwith carry out all instructions which the Government of Burma may on the report of said officers give in writing under the hand of the Secretary to the Government of Burma in the Revenue Department as to the said works or anything connected therewith provided such instructions be capable of being carried out without occasioning an unreasonable increase of cost in carrying on the said operations and without otherwise prejudicing the Licensee.

18. If any royalty hereby reserved shall be in arrears or unpaid for the space of sixty days next after the day whereon the same ought to be paid (whether the same shall have been

Power of re-entry on default in payment of royalty.

formally demanded or not) and so often as the same shall happen the Grantor by his agents or servants may enter into and upon the land leased under the provisions of clause 7 hereof and may distrain all or any of the plant machinery and stock of every description thereupon and all hamboos timber and other materials or plant of any description whatsoever belonging to the Licensee then in or upon the said premises and may sell and dispose of the same or any part thereof for the purpose of obtaining payment of all royalty which shall then be in arrear and all costs and expenses occasioned by the non-payment thereof or by such distress but without prejudice to the right of the Grantor to recover by suit or otherwise any royalty in money then or thereafter due by the Licensee.

19. The Licensee shall appoint at as early a date as possible but not later than the 1st day of (g)

Licensee to employ a local agent.

and shall continue to employ an agent holding a full power of attorney on his behalf at Rangoon or such other place in Burma as the Government of Burma may in consultation with the Licensee appoint and all notices served on or communications made to that agent by or on behalf of the Grantor shall be considered as duly served on or communicated to the Licensee and shall be binding upon and be deemed a proper notice to him.

20. The Licensee shall not assign the benefit of this agreement or grant

Licensee not to assign transfer, etc., his rights and powers without permission.

transfer mortgage or part with any right or privilege hereunder granted without the permission in writing of the Government of Burma under the hand of the Secretary to the Government of Burma in the Revenue Department first had and obtained.

21. It is hereby further agreed that if the licensee his agents or servants

Penalties for breach of agreement.

should commit any breach of the conditions or covenants contained in this agreement he shall in addition to any other penalty to which he may be liable pay to the Grantor on demand of the Divisional Forest Officer a sum not exceeding Rs. 500 for every such breach as and by way of liquidated damages and shall indemnify the Grantor from all suits claims and demands by third parties arising directly or indirectly out of such breach and also shall make good any other loss thereby occasioned to the Grantor.

22. Notwithstanding anything herein contained it is hereby agreed and

Power of Grantor to terminate this agreement on six months' notice.

declared that these presents and the rights concessions powers and privileges which are hereby given shall be absolutely null and void upon the expiration of six calendar months from the date of a notice in writing from the Government of Burma under the hand of the Secretary to the Government of Burma in the Revenue Department making the same null and void for any of the following reasons namely—

(a) in the event of no adequate commencement of operations to effect the purposes hereinbefore indicated having been made by the Licensee on or before the first day of (g)

(b) on the breach on the part of the Licensee of any of the conditions and covenants under and subject to which these presents are made.

23. The Licensee may terminate this agreement by giving to the Govern-

Power of Licensee to terminate this agreement on six months' notice.

ment of Burma six months' notice in writing of his intention so to do.

24. In the event of any dispute

Decision of the Government of Burma to prevail in disputes arising out of the interpretation of this agreement.

arising regarding the interpretation of any clause or provision of this agreement or the due performance or observance of the same the decision of the Government of Burma thereon shall be final and binding on the Licensee.

(g) Date following date of expiry of one year from date of commencement of agreement.



[illegible]

Signed by the said

in the presence of—

Rev. Secy. to Govt. of Burma.

Signed by the said

in the presence of—

*Licensee.*

## SCHEDULE I.

The concession area referred to in clause 2 of the agreement comprises the following areas

excluding the following areas, viz.—

- (a) For *taungya* cultivation [vide foot-note to clause 5 (f)].  
(b) For local consumption and sale of bamboos to the public [vide clause 5 (g)].

## SCHEDULE II.

*List of unreserved trees referred to in Clause 13 of the agreement which may not be extracted for fuel.*

[illegible]

## Government of Assam.

Letter, dated 4th June 1924, from the Government of Assam, forwarding replies to questionnaire No. II.

I am directed to refer to your letter No. 352, dated the 1st May 1924, on the subject of the paper industry and to furnish such information as is available on the points dealt with therein.

A. I am to forward herewith copies of the papers noted in the margin\*

\* Notes by Messrs. Mercer, Raitt and Pearson.

Report by Mr. Pearson on the grass area in the neighbourhood of the Monas river.

Note by Mr. Hawkins.

showing the result of such enquiries as have been made in this province. Mr. Pearson's report is the only one which examines in detail the possibilities of a particular area. Since the submission

of his report conditions have changed. Cultivation has extended and the area available has been reduced.

2. Taking the sub-heads in paragraph 3A of your letter the present position is—

- (1) There are large areas of grass and reeds (wild *saccharum* and *phragmites*) in the valley of the Brahmaputra and between the Surma river and the southern face of the Khasia Hills, but those in the Surma Valley are to a great extent on settled land and have a fairly high commercial value as fuel for burning limestone, while the available areas in the Brahmaputra Valley are diminishing with the spread of cultivation. Bamboos are plentiful in some of the lower hills.
- (2) The grass areas are near the rivers which afford means of access. Bamboos are often in very inaccessible places and only those within easy reach of floating streams can be extracted profitably.
- (3) Coal can be had from the coal mines of Upper Assam and can be carried by rail and water. Timber would be available for fuel, and the reeds themselves make good fuel.
- (4) Lime of excellent quality is worked on the south face of the Khasia Hills and could be taken by steamers to the Brahmaputra Valley. The price varies with Calcutta prices. No lime is now worked in the Brahmaputra Valley but limestone is believed to exist in the Mikir and Bhutan hills.
- (5) Local labour is scarce and unreliable. It would probably be necessary to import labour from a distance in competition with the tea industry. Wages will depend on the class of labour; local labour may cost 12 annas a day and imported labour will be little cheaper after allowing for the cost of importation.
- (6) There is no definite information as to a suitable site other than that examined by Mr. Pearson. Probably others could be found.

3B. (1) No concessions have as yet been granted by the Government. Applications have been received from time to time and Government have offered favourable terms but in every case the applicant has eventually dropped the project. In one case in 1917 this Government offered the monopoly of cutting grass over 20,000 acres in which all grazing and cultivation would be prohibited. The concession was to be for 21 years with an option of renewal for another 14 years subject to a revision of rates. No royalty was to be charged for 5 years and thereafter a royalty of Re. 1 a ton was to be levied, subject to a minimum of Rs. 10,000 a year after the 7th year. In another case the Government proposed to settle a smaller area by a lease of the land itself with a revenue free term of three years. The question of the royalty on output in this case was not decided, as the negotiations were broken off by the Company concerned. The Government are unable to say definitely what terms would now be offered. Much would depend on whether the promoters desired an actual lease of the land or merely the monopoly of cutting grass over a particular area.

(2) There would probably be local opposition to the grant of any such concession, but the Government consider that provided the interests of the cultivators were safeguarded, there would be no objection to the grant of a concession.

C. Transport is by road, river or rail. The freight may be estimated at one rupee a maund to Calcutta.

D. No estimate of the local demand for machine-made paper can be given.

E. As already stated, the industry has not yet been started in Assam, but some of the bamboos exported are said to be used by paper factories in Bengal.

4. The Government regret that in the time available it is impossible to supply the maps asked for by the Tariff Board.

Enclosure I.

**Note by Mr. L. Mercer, President, Forest Research Institute and College, Dehra-Dun.**

*Assam Grasses.*

As pointed out by Mr. Pearson in his note the enquiry falls under 2 heads, (i) enquiry into the outturn, cost, factory sites, etc., and (ii) the value of the material for pulp.

We have already arranged that Mr. Pearson and Mr. Hle (who will have to identify the grasses very carefully on spot), proceed to Assam for a short time next autumn and that the enquiry by Mr. Pearson then follow the lines of the enquiry into the suitability of bamboos for the pulp. This will complete the first stage. The second stage is an enquiry into the pulp value of the material based on extensive trial on a commercial scale.

Mr. Raitt holds that the Calcutta Mills cannot take this on, as their machinery is unsuitable. Mr. Bryce, the paper maker of the Titaghur Mills, tells Mr. Pearson that he has machinery quite suitable for testing this pulp and as a personal favour to him is willing to test it under certain conditions. These we can and will probably accept and thus we may expect that some 100 tons of grass will be practically tested next cold weather in the presence of Mr. Pearson, and it is of importance that he be present. Arrangements for this grass are being made.

If Mr. Raitt's contention is right that the mills cannot test the grasses properly and if Mr. Bryce is wrong then it will be advisable to set up a small pulping plant departmentally, but before taking further action in this respect it will be as well to await the results from Titaghur. Raitt alludes to the possibility of the United Provinces doing this. It is just possible that they may but the scheme has yet in no way materialised, and will require very careful consideration, as the plant will cost perhaps some 4 lakhs of rupees. It will be interesting to see what progress has been made in a year's time when the Titaghur results are out, till then Assam should wait.

I quite agree with Mr. Raitt's paragraph 2. If the Assam Government feel doubtful about the ability of the Economist to report on factory sites, etc., from a pulp maker's point of view, it is always open to them to ask Mr. Raitt to accompany him settling what fee they will give him, though at present I think this is premature, i.e., until the grass has been tested on a commercial scale.

Copies of notes by Mr. Pearson and Mr. Raitt are attached.

Enclosure II.

**Note by Mr. Raitt, regarding proposals of Government of Assam for testing paper pulp grasses.**

1. A good deal of work, so far as laboratory tests are concerned, has already been done on several of the Assam grasses and the results are published in the joint report by Mr. Hole and myself in one of the "Indian Forest Records." These tests are perfectly reliable so far as they prove cellulose to exist in the grasses in commercially paying quantities and in indicating the methods of treatment likely to secure the best results but to be convincing to the paper industry they require to be supplemented by tests on a commercial scale. I do not think this can be satisfactorily done at any of the paper mills. Their plant has been designed for the treatment of rags and small easily digested grasses of the baih type and cannot deal successfully with coarse grasses of the species under consideration.

The only satisfactory means of arriving at their true commercial value is for one of the Local Governments to erect a plant on a minimum commercial scale which should be so constructed as to permit of expansion in the event of a commercial firm taking it over after the Local Government have made all the use they require of it to prove the value of and to advertise their grasses. Governments would then be in a position to demand full value for any concessions or licenses granted instead of being obliged to give the stuff away in order to induce a firm to undertake the pioneering risks of a new enterprise.

2. The suggestions as to crushing, retting and drying are not practicable. I do not think it would be possible to carry them out on the large scale that would eventually be demanded and, when done, the material would have no additional value to a factory situated near or in the producing districts; that being an essential feature of the industry. *viz.* that the reduction to pulp must be accomplished *in situ*. The factory can do in a few hours, as part of the digestion process, what retting would take six weeks to accomplish. If it was intended to hale and ship the material to Europe, retting might have slight advantage in a reduction of weight and bulk, but, commercially, it is impossible to do this.

3. I have recently been requested by the Government of the United Provinces to furnish them with estimates of the cost of erecting and working a small commercial plant specially designed to deal with this type of grass. I gather from this that they contemplate proving and advertising their grasses on the lines suggested in paragraph 1 above. There would be no advantage in two Governments doing this as the Assam grasses could quite well be tested at the United Provinces plant or *vice versa*. I would therefore suggest that the matter stand over until it is known what the United Provinces Government intend to do.

4. For the same reason it is perhaps unnecessary to discuss in detail as yet the terms, etc., of my share in the Assam enquiry as this may be largely modified by the conclusion arrived at by the United Provinces Government, at least as regards the actual testing of grasses. It would still, however, be advisable for me to inspect and report upon suggested factory sites and local conditions from the pulp manufacturers' point of view. The Economist's and Botanist's enquiries into outturn, cost of extraction and identification of species, and the precautions to be taken to secure maximum sustained yields from any given area would also still have to be carried out.

Enclosure III.

**Note by Mr. Pearson, regarding proposals of Government of Assam for testing, etc., paper pulp grasses.**

Such enquiries naturally fall under two heads (i) enquiry as to outturn, cost of extraction, suitable factory sites, local conditions, and (ii) the value

of the raw material for paper pulp. When carrying out the bamboo enquiry I did what was necessary under No. (i) and Mr. Raitt and the Titaghur Paper Mills solved the question arising under No. (ii).

In the case of the Assam enquiry I proposed to do (i)—on this point I have already reported to you—and under head (ii) Mr. Raitt has covered much of the ground in the laboratory, the report on his work having been published in a forest publication. We now propose to complete the work under head (ii) by sending some 100 tons of 3 or 4 species of grass to be tested at Titaghur.

As regards the point raised by the Assam Government, in their No. 851-R., dated the 19th February 1915, to the Secretary to the Government of India, to the effect that a gentleman has reported that interested persons are reluctant to use Assam reeds in their crude form for the manufacture of paper pulp, and that the stems should be crushed and the fibre cleaned, in other words retted before digestion, I would propose that samples of the crude stuff be submitted to either Mr. Raitt or the Titaghur Paper Mills for testing and retting. This part of the enquiry could well be carried on at the same time as the information under head (i) is being collected.

As reported to you before it is necessary that at the same time as information is being collected under head (i) that the Forest Botanist carry out the identification of the grasses on the spot.

#### Enclosure IV.

### Note on the Monas river grass areas in Assam in connection with the paper pulp enquiry.

#### I.—General.

The object of this enquiry was to ascertain the possibility of utilizing the elephant grasses for the manufacture of paper-pulp, which are found growing on the banks of the Monas river and in the surrounding country at the junction of this river with the Brahmaputra.

In making such an enquiry the salient points which require consideration are:—

- (i) the local conditions which affect such a scheme;
- (ii) the area covered by grass;
- (iii) to ascertain which species of grass predominate;
- (iv) to ascertain the possible outturn of any one or more species;
- (v) the cost of extraction to a possible factory site;
- (vi) the mode of cropping the grass and the area required to run a factory;
- (vii) to ascertain what labour is available, and
- (viii) to fix on a possible factory site with suitable lines of export.

In this note it is not proposed to deal with the value of the various species of grasses for pulp making, which covers another field of enquiry.

To obtain first-hand information on the above points, the writer proceeded to Sorbhog, a small station on the Eastern Bengal State Railway, and from thence marched north-west to a place named Bogidhara, on the Monas River, some 8 miles above the point where the Eastern Bengal State Railway crosses this river. From Bogidhara the river and surrounding country was inspected down to Jogigopa, a place close to the junction of the Monas and Brahmaputra, some 50 miles by river from Bogidhara.

To complete the inspection it was necessary to camp on the river, the places chosen to do so besides Bogidhara being Bhattipara, Goalpara and Dignitari; besides this, short halts were made all the way down to inspect the areas between the camps.

It is necessary, before discussing the possibilities of such a scheme in detail, to briefly review what has already been done in connection with the grass-pulp enquiry. The most important treatise on the subject is to be found recorded in Mr. Raftt, the Cellulose Expert's note entitled "Report on the Investigation of Savannah grasses as material for production of paper pulp," Indian Forest Records, Volume V, Part III, with a very valuable preface by Mr. R. S. Hole, Forest Botanist, on the occurrence, habits and distribution of the prevalent species of grass. The other important treatise bearing on the subject is by Mr. R. S. Hole, Indian Forest Memoir, Botanical Series, Volume 1, Part I, 1911, in which he describes 8 species, and it was with this most valuable work that the enquiry commenced in 1908.

Lastly, it is necessary to record the writer's appreciation for the help rendered by Mr. Laine, Deputy Commissioner of Goalpara, Mr. Tottenham, the Conservator of Forests, Western Circle, Assam, Mr. A. W. Milroy, Deputy Conservator of Forests, Kamrup Division, Mr. P. G. Mukerjee, Sub-Divisional Officer, Goalpara, and Mr. Chatterjee, Assistant Superintendent, Bijni Estates, for help rendered and for making all necessary arrangements which enabled the writer to carry out his tour and collect the necessary information.

### II.—*Local Conditions.*

The Monas river is a large tributary of the Brahmaputra, dividing the Kamrup and Goalpara Districts, the latter comprising the Bijni estates. It flows more or less north to south with a westward tendency from Chaulkhaia Moukh to the main river. It is a winding broad river in the plains, and is continually eating into its banks and throwing up new ones, besides at times changing its course over short lengths. At Bogidhara, some 30 miles from where it enters the Brahmaputra, it is a swift flowing stream, 125 to 250 yards wide and up to 10 feet deep in the main channel. The water here is clear, though innumerable specks of mica and sand are held in suspension; as one goes downstream the water becomes more and more turbid, the current more sluggish and here the river attains a width of 500 yards and over, until one reaches the Brahmaputra just below Goalpara. The banks are generally steep on one side and up to 10 or 12 feet in height, while on the concave side low sand banks are the general rule, gradually rising up to the level of the plain. At the mouth of the Monas there exists a bar, covered at low level by at least 4 feet of water.

The surrounding country is flat until one comes to within 20 miles of the junction of the Monas and Brahmaputra from there on the west bank, a low broken hill range extends down to Jogigapa. The country is fairly intensely cultivated, it is true that large areas occur covered with grass, though as a general rule to within 20 miles of the Brahmaputra, these areas consist of relative small patches of grass land, generally situated between one village cultivation and the next. These areas are heavily grazed by cattle and buffaloes belonging to the villagers and, of even greater importance, the large herds belonging to professional graziers who have settled on the banks of the Monas river, after having been turned out of the reserved forest areas to the north. Generally speaking, these heavily-grazed areas stop at Tupgaon below which place the grazing is not excessive.

The only other condition about which a remark is necessary is the occurrence of fires. These begin in the upper areas at the end of November and beginning of December, though even then they are not serious. In the heavy grass areas below Rangapani and in the Barpeta subdivision, at the time of inspection in January, the grass was still far too green to burn. Therefore, if the grass is cut by the end of January, which it should be, there is relatively little danger from fire.

### III.—*Area covered by grass (see Sketch Map).*

Excluding relatively small patches of grass, lying between cultivation and on the edge of the river and which above Tupgaon are nearly all heavily grazed, the first area of importance covered with grass is on the east bank

opposite Goalpara, and known as Harri Chor. The next area down the river is just west of Tupgaon. Again, below Tupgaon there exists a large stretch of grass land contained in the villages of Lotihari, Anguri, Pidardhara and Nayashastra. In the Barpeta subdivision of the Kamrup district, between Chaulkhana Moukh on the east bank, is a sea of grass, stretching southward to the Brahmaputra, part of which is known as the Borjania-Digaltari Chor, this is probably the most extensive of the grass areas on the Monas. The latter is an especially suitable grass area from which to obtain grass for pulping purposes, as it is annually flooded by the Brahmaputra, and is therefore not likely to be taken up for cultivation. The only other area worth mentioning on the banks of the Monas, is a small area named Tinkunia Chor, just south-west of the village of Jitkihari.

It is not possible to give anything but the roughest idea of the area of these grass lands, as they are not demarcated on the ground. The following figures are based on ocular observation, and from information collected from the local officers:—

No.	District.	Name of area.	Size.
1	2	3	4
1	Kamrup . . . . .	Harri Chor . . . . .	1,000 acres
2	Bijni estate . . . . .	Tupgaon area . . . . .	1,200 „
3	Ditto . . . . .	Lotihari area and up river . . . . .	3,000 „
4	Kamrup-Barpeta subdivision . . . . .	Borjania and Digaltari Chor . . . . .	10,000 „
5	Bijni estate . . . . .	Tinkunia Chor . . . . .	600 „
TOTAL			15,800 „

. That the above demonstrates all the grass areas 50 miles up the Monas, is of course not the case; it however represents the most important areas and would be ample to supply a very large pulp factory indeed.

All round the junction of the Brahmaputra and Monas and up and down the former river are other large areas covered with grass. For instance, a large grass area exist on the east bank of the Brahmaputra below Goalpara, stretching from the village of Pañchratna downstream to Kolishabita, a distance of about 40 miles and anything from half to 3 miles broad. This area fringes the river and is situated in the Mechpara estates, the headquarters of which are Lukhipur.

Again, on the Kamrup side of the Brahmaputra up to and above the Dalgoma Steamerghat, in the Angulkati Chor, situated in the Barpeta subdivision, is a large area of grass covering many thousands of acres.

Above these areas on both banks of the Brahmaputra are many other grass areas, but for the purpose of this report only those down the Monas and just round its junction with the Brahmaputra have been chosen for description, as they in themselves contain far more grass than could ever be utilized by the largest pulp factory.

#### IV.—Species of grasses found in the locality.

In this connection it is at present only necessary to mention those species which occur in sufficient quantities for pulping purposes, though no doubt it will be necessary in the future to make a complete Botanical survey of these grasses. It was hoped that the Forest Botanist would accompany the writer last November to help him in the identification of the grasses and all arrangements were made to do so, when the tour had to be postponed till January 1916 owing to transport difficulties arising from a severe outbreak of cholera. The writer could only identify the common species and even his identification will have to be checked by the Forest Botanist when the flower heads are available next autumn.

On the banks on the upper reaches of the Monas between Bogidhara and Bhattipara, Khagra (*Saccharum spontaneum*) was found on the banks, and Batta, *Saccharum Narenga*, which is found inside the Khagra zone is mixed with the Batta; here were also patches of Nal, *Phragmites Karka*, *Kacharia Tanga*, *Saccharum arundinacea*, Elua, *Imperata arundinacea*, Bor Samrunz, *Andropogon Nardus*, Bara Tanga, *Anthisteria gigantea* and a species called Ham Tanga, which the writer failed to identify. Of the above only Batta, Elua and Khagra were found in any quantity. It may here be mentioned that the Deputy Ranger of the Bijni Range, reports that the Batta composes 80 per cent. of the crop, Elua 10 per cent., Khagra 5 per cent., the rest being made up of other species.

On going down the river to Goalpara, 8 or 10 miles below Bhattipara, the land is more intensely cultivated than higher up, and where grass occurs it consists of Khagra on the banks and Batta more inland.

From Goalpara southwards the grass areas improve, both in size and quality, Batta becomes scarcer and its place is taken by Khagra broken up by patches of high Nal on the lower land.

From about 6 miles above Chaulkhaan Moukh starting at Raugapani the grass areas, especially on the west bank, are very fine, Khagra being far the most common species, growing nearly pure. From Chaulkhaan Moukh southwards, passing Digaltari on the east bank and further down to Jitkibari on the west bank, there exists a sea of grass, on low-lying ground, consisting of nearly pure Khagra, both high ground and swamp varieties, with patches of Nal in the more swampy areas.

For working purposes therefore, the three important grasses are Batta, *Saccharum Narenga* in the upper reaches of the river, and Khagra, *Saccharum spontaneum*, both high ground and swamp varieties, and Nal, *Phragmites Karka*, found on both sides of the river, from 15 miles upstream to its junction with the Brahmaputra.

Before leaving this subject it is necessary to again emphasise the fact that the reason large tracts of Khagra grass are found from Chaulkhaan Moukh southwards practically uninterrupted by cultivation, is that this low-lying land in the Barpeta subdivision is annually submerged by the Brahmaputra, hence favouring the growth of grass and preventing cultivation coming into this area. Incidentally it may be mentioned that this area sank during the great earthquake, which allows the flood waters of the Brahmaputra to submerge it annually.

#### V.—Outturn.

In order to determine outturn per acre, sample plots were selected in areas representing an average crop of grass.

A sample plot in an area covered chiefly with Batta, *Saccharum Narenga*, was selected near Goalpara. Half an acre or 1,120 square yards were laid out on the ground, the whole crop cut and the Batta grass huddled and



weighed separately to the other species, which consisted nearly all of *Ham Tunga*. The following were the results obtained:—

Area of sample plot.	Species.	Weight green, in lbs.	Weight dry, in lbs.	REMARKS.
1	2	3	4	5
$\frac{1}{2}$ acre .	Batta, <i>Saccharum Narenga</i>	7,191	3,843	Rather poor soil.
	Ham Tunga and other species.	283	148	On high ground.
	Total for $\frac{1}{2}$ acre .	7,479	3,991	
	Outturn per acre .	14,958 =6.7 tons.	7,982 3.5 tons.	

This Batta area, though densely stocked with short stalks and grass blades to a height of about 8 feet, contained few long stalks of flowering culms, i.e., of more than one year's growth (see photo), which tends to show that the area was burnt over last year, and as in the surrounding areas fires were commencing, it is fairly certain that this was the case. The outturn therefore virtually represents the state of affairs that may be expected by annual cuttings and not a crop cut on a 3 years' rotation. This point will be referred to later on when considering the question of outturn.

A second sample plot was taken near Digaltari, in a nearly pure Khagra, *Saccharum spontaneum*, area, consisting of about two-third high ground and one-third swamp varieties. The whole area was cut, the grass weighed green, and a large sample kept to determine loss in moisture when absolutely dry. The figures obtained from this area were as follows:—

Area of sample plot.	Species.	Weight green, in lbs.	Weight dry, in lbs.	REMARKS.
1	2	3	4	5
$\frac{1}{2}$ acre .	Khagra, <i>Saccharum spontaneum</i> .	21,221	8,706	On good alluvial soil.
	Total for $\frac{1}{2}$ acre .	21,221	8,706	
	Outturn per acre .	42,442 =19 tons.	17,412 7.8 tons.	

Again, a third sample plot was taken in pure Nal, *Phragmites Karka*, grass, on the west banks of the river, opposite Digaltari, which yielded the following quantity of Nal grass:—

Area of sample plot.	Species.	Weight green, in lbs.	Weight dry, in lbs.	REMARKS.
1	2	3	4	5
½ acre.	Nal, <i>Phragmites Karka</i> .	11,036	4,503	Rich damp soil, often flooded by river.
	Total for ½ acre .	11,036	4,503	
	Outturn per acre .	44,144	18,012	
		19.7 tons.	8.04 tons.	

From the above data we may safely take the outturn of dry grass per acre of the three most important species as:—

	Tons per acre.
1. <i>Saccharum Narenga</i> , 'Batta' . . . . .	3
2. <i>Saccharum spontaneum</i> , 'Khagra' . . . . .	7
3. <i>Phragmites Karka</i> , 'Nal' . . . . .	8

#### VI.—Cost of extraction to a possible factory site.

The cost of extraction is based on the time it took to cut the sample plots, the cost of labour, the distance of the grass areas from the river, and the lead by water to the factory.

##### (i) Cost of landing one ton of Batta, *Saccharum Narenga*, at factory.

Rs. A. P.

(i) Twenty men cut and bundled ½ acre of grass in an hour, therefore 10 men would cut 2 acres in 8 hours, cost at annas 8 per man per day=Rs. 5, yielding from 2 acres 13.4 tons of green or 7 of dry grass. Cost per ton of dry grass . . . . .	0 11 5
(ii) Cost of carrying one ton of dry grass, an average distance of one mile, to river bank; assuming a man carries 100 lbs. per trip and makes 3 trips a day, earning 8 annas per day. Cost of taking one ton of dry grass to river bank . . . . .	3 12 0
(iii) By taking grass to mill from Goalpara in flat bottomed boats, 10 tons capacity, 25 miles or 2 days' journey down and 3 to return, each boat manned with 4 men at 8 annas each a day. Cost of taking down one ton of dry grass to mill . . . . .	1 0 0
(iv) Cost of loading and unloading 1 ton of dry grass . . . . .	0 8 0
(v) Miscellaneous charges . . . . .	0 2 7
Total cost per ton of dry grass at factory . . . . .	6 2 0

(ii) *Cost of landing one ton of Khagra, Saccharum spontaneum, dry grass at factory.*

	Rs. A. P.
(i) Forty men cut and bundled $\frac{1}{2}$ acre of Khagra grass in 4 hours, therefore 40 men would take a day to cut one acre, cost Rs. 20 per acre. Yield 19 tons per acre green or 7.8 dry. Cost of cutting one ton of dry grass . . . . .	2 9 0
(ii) Cost of transporting one ton of dry grass from cutting area to river as in the case of Batta . . . . .	3 12 0
(iii) By taking grass to mill from centre of Khagra grass areas, say Chaulkhana Moukh to factory, distance 10 miles. One day going, 2 returning upstream, 4 men at 8 annas each per day per boat carrying 10 tons of dry grass. Cost per ton to factory . . . . .	0 9 7
(iv) Cost of loading and unloading one ton of dry grass . . . . .	0 8 0
(v) Miscellaneous charges . . . . .	0 1 5
Total cost per ton of dry grass at factory . . . . .	7 8 0

(iii) *Cost of landing one ton of air dried Nal, Phragmites Karka, at a factory site.*

	Rs. A. P.
(i) Fifty men took 2 hours to cut $\frac{1}{2}$ acre or a day to cut one acre, therefore cost of cutting one acre comes to Rs. 25, paying labour at 8 annas a day. An acre yielded 19.7 tons of green grass or 8 of dry grass. Cost of cutting one ton of dry grass comes to . . . . .	3 2 0
(ii) Cost of taking from cutting area to river bank, as in the case of Khagra, per ton dry . . . . .	3 12 0
(iii) Cost of taking down in boats to factory (as per Khagra) . . . . .	1 0 0
(iv) Cost of loading and unloading . . . . .	0 9 0
(v) Miscellaneous charges . . . . .	0 2 0
Total cost of landing one ton of dry Nal grass at factory . . . . .	8 8 0

VII.—*Mode of cropping grass and area required to run a factory.*

Mr. Hole, Forest Botanist, has discussed the rotation on which the various species can be cropped (see page 17, Volume V, Part III, Indian Forest Records).

We may safely abide by his discussion. He gives the rotation for Batta, *Saccharum Nurenga*, as 3 years and for Khagra, *Saccharum spontaneum*,

and for Nal, *Phragmites Kurka*, as two years. The sample plots gave the outturn per acre of dry grass as follows:—

	Tons per acre of green grass.	Tons per acre of dry grass.	Yield per acre worked on rotation.*
1	2	3	4
Batta . . . . .	6.7	3.5	3.5
Khagra . . . . .	19.0	7.8	3.9
Nal . . . . .	19.7	8.0	4.0
TOTAL .	45.4	19.3	11.4
Average per acre .	15.1	6.4	3.8

\* NOTE.—See remark on page 4 as to rotation in this particular case.

Before discussing the question of area required to run a factory, one other point requires mention with reference to cropping these grasses. The Khagra and Nal grasses contain a large quantity of old dry stems mixed up in the base of the crop; these will have to be sorted out after the first cutting, though this difficulty will disappear after the first rotation, when much more even aged and cleaner grass will be available. Again, the large stems of Khagra and Nal have a quantity of dust and sand adhering to the lower portions of the stalks, due to the sandy nature of the soil and the flood waters which sweep over these lands, so that the grass will require soaking to get rid of this foreign matter before it is pulped. At the same time it is possible that the yield per acre may be slightly reduced in the second rotation owing to the disappearance of the very old culms.

In Section V of this note mention was made that the Batta area really represented a crop cut over *annually* and not on a 3 years' rotation. For this reason, in making the calculation of area required the Batta area has not to be multiplied by 3, as the crop in which the sample plot was taken really represents the effect of annual cutting and not cutting on a 3 years' rotation.

It is interesting to compare the figure of outturn of dry grass obtained by Mr. Hole in fully-stocked areas when worked under the rotations considered most suitable for their permanence (see page 17 of the Forest Record on this subject), viz.:—

Batta      = 5.6 tons per acre per annum.  
 Khagra    = 3.2 tons per acre per annum.  
 Nal        = 2.9 tons per acre per annum.

Total     = 11.7 tons per acre per annum.

Average per acre of all 3 species = 3.9 tons per acre per annum.

This figure agrees very well with that obtained by the writer, i.e., 3.8 tons per acre. Taking these figures jointly into consideration the outturn of dry grass, taking all three species into consideration, may safely be put at 3 tons per acre per annum allowing one ton waste due to faulty stems and foreign matter.

Based on the above figure of outturn of 3 tons of dry grass per acre, taking an average yield of 33 per cent. of pulp on weight of dry grass, in order to run a pulp with an outturn of 10,000 tons of pulp per annum, we should require 10,000 acres of grass land. The estimated figure of grass land actually inspected amounted to 15,000 acres and much larger areas are available, so that by only working the areas described in this report there remains 5,000 acres as a margin of safety.

#### VIII.—Labour.

The labour question in Assam is always a very difficult one, as has been demonstrated by the tea industry in the Assam and Surma Valleys and the coal and oil fields in the Lakhimpur division. A local factor exists on the Monas which probably solves this difficult problem. In recent year there has been an influx of Bengali Muhammadans called Bhatios, who have settled on the banks of the Monas river notably at Borgana Chor, Digaltari, Moduphol Chor and Godamibala Chor. (See Sketch Map.) These men are hard-working, and cultivate narrow strips of land along the river banks. There are as many as 600 houses belonging to these people, so probably at least 500 working men are available. They work for 8 annas a day, and as they plough for their *ashu* or paddy crop in March and reap in August and September, they would be available from October to January to cut grass, and from local enquiries it appears that they would be willing to take on local contracts for extraction. Moreover, it appears that the tendency is for still more such settlers to take up land on the Monas, so that further supplies of labour will probably be forthcoming in the future. Estimates based on cutting Khagra in sample plots show that it takes approximately 4 men to cut a ton of dry grass per day, therefore 500 men would cut 125 tons per day or 3,750 tons per month or 15,000 tons between October and January. Basing one's calculations on so small an area as  $\frac{1}{4}$  acre is obviously unsafe; on the other hand, it is a well-known fact that when starting an entirely new work, as, for instance, cutting a sample plot, the cost is far above normal while the rate of work is far slower than would be the case were the work carried out by contract on a commercial scale. The above figures may therefore be taken as extremely conservative.

#### IX.—Proposed factory site.

The proposed factory site is in the vicinity of Jogigopa, a small tahsil town in the Bijni estate, just below the junction of the Monas with the Brahmaputra. Its great value lies in that it not only taps all the grass areas above on the Brahmaputra but also taps the Monas areas. It has direct connection by steamer with Calcutta and by large boats with the grass areas up both rivers. The banks at and below Jogigopa are high and above flood limits. It is about 10 miles from the centre of the main grass area on the Monas and about 20 miles from those round the Dalgoma steamerghat on the Brahmaputra.

#### X.—Conclusion.

The conclusions arrived at are:—

- (i) That there is ample grass to run the largest pulp factory.
- (ii) That the grass, notably Khagra, can be extracted at a very cheap rate.
- (iii) That the danger from fire is practically nil, provided the grass is cut before the end of January.
- (iv) That for all intents and purposes pure Khagra, Batta and Nai are available.
- (v) That the labour supply is sufficient for a factory of 5,000 tons outturn of pulp per annum, and that the labour supply is likely to increase in the future.

- (vi) That anyhow near the rivers in the Barpeta subdivision cultivation and grazing will not encroach on the grass areas.
- (vii) That the most suitable site for a factory is probably in the vicinity of Jogigopa.

R. S. PEARSON,  
*Forest Economist.*

#### Enclosure V.

In attempting to arrive at the Commercial possibilities of the manufacture of paper from the waste grasses which grow so prolifically over the huge areas on the banks of the Brahmaputra I am primarily indebted to Mr. R. S. Pearson who in his capacity of Forest Economist was deputed by the Government of India, at the request of the Administration of Assam to investigate the matter *in situ*.

As an outcome of his investigations Mr. Pearson has written a very valuable report, a copy of which he was courteous enough to let me see prior to its regular publication. This served as an invaluable starting point and enabled me to further my enquiries while at home on leave. I was advised by Mr. Pearson to refer to (a) Mr. S. Milne of Messrs. Bertram & Co., Edinburgh, and (b) Mr. W. Raitt of the Eastern Development Corporation, Limited, London, as being men who had had practical experience of and have devoted considerable time and energy upon the problem of the most suitable plant for dealing with this class of material.

In his interesting note upon the subject Mr. Pearson gives us the following facts and figures and which form my initial data.

While very large areas of grass land are available Mr. Pearson has some very pertinent points to urge against the selection of suitable tracts to operate on.

The further you go from the actual Brahmaputra bank the higher the land. This means comparative freedom from floods and consequent danger from "fires." As these fires are not accidental but are deliberately caused by graziers, this is a very important detail.

In many ways the comparative flood-free areas would be the more satisfactory. Among the chief advantages which occur to one is the possibility of light railway transport of the grass to the factory. Any added danger of fire however would appear to outweigh all other considerations.

Selecting a possible area Mr. Pearson estimates that some 15,000 acres are available near the junction of the Monas and Brahmaputra rivers but should this not be sufficient there is plenty of land equally suitable more or less adjacent.

Upon this 15,000 acres the chief grasses met with appear to be (a) Khagra (*saccharum spontaneum*) and (b) Bhatta (*saccharum Narenga*). Of these the Khagra appears to predominate. More especially is this the case in the lower reaches of the Monas river.

#### *Out-turn per acre.*

Mr. Pearson's figures are taken from actual results over small measured areas and as he personally selected such area with a view to getting fair average samples they should be as accurate as anything could be short of actual experience over the whole.

He gives the following production per acre:—

Bhatta green	6.8 tons	=	dry 3.5 tons.
Khagra green	19 tons	=	dry 7.8 tons.

As, however, the Bhatta had obviously been burned the previous year thus representing a single year's growth and as Khagra has to be cut upon a two-year rotation the effective production per acre per annum may be considered much the same and he considers that for purposes of calculating areas for a required production both species may be taken as producing 3 tons per annum of dry grass.

According to Mr. Pearson's experiments one ton of dry Bhatta represents roughly two tons of green grass, whereas one ton of dry Khagra represents nearer two and a half of green.

Experiments made by the Titaghur Mills showed that the conversion from dried grass gave 33 per cent. of "pulp," consequently one ton of pulp means dealing with three tons of dry and six tons of green Bhatta, and three tons and 7-5 tons respectively of Khagra.

Labour.		Rs. A. P.	labour required to cut and the resulting cost of cutting the grass. I should hesitate to accept, as a reliable basis, figures which were arrived at from the cropping of half acre blocks. The actual experiments showed that to cut and bundle one ton of the dry grasses cost:—
Cutting and Bundling	.	2 0 0	
Cartage to river	.	7 12 0	
Boating	.	1 0 0	
Handling	.	0 8 0	
Sundries	.	0 4 0	
		<u>11 8 0</u>	

	Rs. A. P.
Bhatta	0 11 5
Khagra	2 9 0
Nal	3 2 0

For purposes of calculation I propose taking Rs. 2 as an estimated cost of cutting and bundling and otherwise I am accepting Mr. Pearson's estimate, thus bringing the cost of dry grass at the factory at say Rs. 7-8 per ton, but in doing so I would emphasise a point which might conceivably upset the figure. Will it be found feasible to sun dry the whole of the crop *in situ* or would green or partially green grass have to be transported?

It depends upon how long it takes to sun dry, also whether the land would be sufficiently dry to leave the cut grass lying or whether preliminary stacking would be necessary.

It is obvious that if the green grass has to be taken to the factory our transport difficulties are enormously increased. Beyond this reference I am ignoring this possibility.

Basing my calculations upon Mr. Pearson's figures the produce of one acre is required per ton of pulp production.

As the question of an economical yet practical size of factory is still unsettled, my figures will be expressed per thousand tons of pulp.

Now let us see what the cost of cutting, bundling, and carting the grass to the river bank means expressed in man power. Rs. 5-12 per ton is the figure we have taken and this has to be multiplied by three to represent a ton of pulp or Rs. 17-4-0 or Rs. 17,250 per thousand tons. Reduce this to Hazorees at annas 8 per day and we get Rs. 34,500.

Our cutting season is four months and if we also have to transport the grass to the factory inside approximately that period owing to danger of fire or any other cause it means say 8,600 Hazorees per month or at 28 working days a labour force of say roughly 300 working daily.

To boat the grass to the factory Mr. Pearson allows for ten ton boats taking five days and a crew of four men.

This would in practice give us say five trips per boat per month or 20 trips spread over the four months. Bringing this to the thousand ton pulp unit it means the employment of 15 boats and 60 men.

Thus if we have only four months to count upon we have to face the problem of a necessary labour force of say 360 souls working daily per thousand tons of pulp turned out by the factory simply to crop and bring the requisite amount of grass to a central position.

Mr. Pearson estimated a total settled population of 500 working men so that this labour question with its eternal perplexities is likely to prove a serious one.

#### *Size of Factory.*

Mr. Pearson assumed a plant capable of turning out 10,000 tons of pulp, but Mr. Milne with whom Mr. Henderson and I have been in communication is very insistent upon the necessity of starting with a factory capable of producing 15,000 tons per annum. This would mean no margin in the land specifically reported upon by Mr. Pearson, though he reports that further areas are available across the river.

As I have tried to demonstrate a factory of this size (15,000 tons) would need—

- (1) A grant of at least 20,000 acres.
- (2) An effective labour force during four months of the year of 5,400 souls.
- (3) A charter of 250 boats capable of carrying 10 tons of grass.

#### *Estimate of cost.*

	£	of setting about construction at present is quite out of the question and the probable cost of materials after the war is impossible to conjecture.
Factory . . . . .	25,000	Messrs. Bertrams, however, went into the matter very carefully and the result they arrived at represented £230,000, or thirty-four and a half lakh of rupees.
Plant . . . . .	110,000	
Freight, etc. . . . .	31,000	
Foundations . . . . .	10,000	
Erection . . . . .	4,000	
Local material . . . . .	6,000	
Water supply . . . . .	1,000	
Bungalows and lines . . . . .	15,000	
Working Capital . . . . .	28,000	
	<u>230,000</u>	

#### *Cost of conversion.*

War conditions made it a difficult matter to estimate the working costs, but Messrs. Bertrams have gone very fully and carefully into the matter with the following result expressed per ton of pulp:—

	Rs.	A.	P.
Chemicals . . . . .	25	7	0
Fuel . . . . .	28	0	0
Superintendence and labour . . . . .	10	0	0
Packing and insurances . . . . .	3	1	0
Freight to Calcutta . . . . .	6	0	0
Agency charges . . . . .	1	8	0
Depreciation on Capital . . . . .	11	8	0
Raw material . . . . .	24	0	0
Per ton d/d Calcutta . . . . .	<u>109</u>	<u>8</u>	<u>0</u>

I have not kept entirely to Messrs. Bertrams figures, having increased cost of fuel, insurances, and raw material slightly to meet local conditions with



regard to coal, provide for insurance upon the raw material and allow for three tons of dry grass to every ton of pulp at Rs. 8 at factory side against their theoretical 2.87 tons of grass at Rs. 7 per ton.

If money be saved under the heading of Chemicals it can only be at the expense of fuel as far as our knowledge goes at present.

Working things upon a Commercial scale usually upsets Laboratory experimental research and I therefore prefer to over-estimate rather than err on the other side. In any case the estimate must only be taken as an "estimate."

#### *Quality of Pulp.*

Mr. Pearson is strongly of the opinion that, cropped regularly, the quality of the raw material will improve and the arguments he advances are convincing. We have this factor in hand as it were, for any improvement in the raw material will mean a saving in cost of conversion or result in a superior and more valuable product—or both.

The treatment given the grass in Calcutta entailed 18.75 per cent. of Caustic (calculated on weight of raw grass) a boil of nine hours at a steam pressure of 75/80 lbs. and after all this 16 per cent. of bleach had to be introduced to the pulp to manufacture what would rank as very common paper selling in pre-war days at 1½d. per lb.

From what I can gather no paper maker would purchase pulp requiring anything approaching this amount of bleach and Messrs. Bertrams are confident that with their digestors such requirement will be reduced to 12½ per cent.

Only actual tests will prove this and, unless the grass improves materially when cut regularly the risk to be run is immense.

#### *A few comparisons.*

Comparing it with other grasses commonly used in paper making I understand that,—

"*Sabai*" can be treated with 3 per cent. less caustic and only half the time of "boil" in the digestors and the resultant pulp requires 6 to 8 per cent. less bleach.

"*Esparto*" requires 16½ of caustic, a boil of 3½ hours at a pressure of only 55 lbs. and given a bleach of 14 per cent. yields 47 per cent. of first class paper.

"*Tambootie*" a grass found in profusion in South Africa gives results similar to *Esparto* and, according to the "*Times*" of 20th September 1916, presents no difficulties in the way of cost of raw material.

It would appear that the pulp so far produced can only be compared in quality with the cheapest wood pulp on the market and the price of this in pre-war days was say £8 per ton c.i.f. British Port. Assume a freight of £1 to Indian Port and we get a competing article landed at say Rs. 135 per ton.

#### *Conclusions.*

From the experiments made and the available data there is little chance of these waste grasses producing anything but a low grade pulp comparable with the very cheapest now obtained from wood from various parts of the world notably Norway, Sweden, and Canada.

Not only is this the case but it would appear as though the cost of treatment even to turn out this cheap grade is disproportionately great. While for instance *esparto* grass appears to lend itself more readily and cheaply, the resulting pulp is valued at as much as £17 per ton as against £8 for the quality our grasses compare with.

Were it not for the conviction that cheap wood pulp will get increasingly difficult to obtain and that after the war prices for such will never reach their former low level, the undertaking would be unsound commercially.

The importation of common pulp into India is, I understand, round and about 12,000 tons per annum. Any cheapening of common pulp would pro-

bably encourage industrial development in the paper-making trade, as the total consumption of paper in India is round about 75,000 tons.

Unless, however, there is a marked improvement in the quality or suitability of the cheap grasses we have (Khagra and Bhatta) as an outcome of regular cropping, I see little chance of any group of financiers risking the necessary outlay.

As will be seen from the details I have given, the estimated Capital aims at being ample for all purposes and the plant offered by Messrs. Bertrams is very complete, up to date, and designed to reduce handling in process, to a minimum.

The size of the factory advocated is, of course, open to criticism. In many ways a 15,000 ton production presents serious difficulties and Mr. Raitt is prepared to suggest a 10,000 ton or even 7,000 ton unit, the latter capable of expansion to 10,000 tons. Without going into the detail Messrs. Bertrams gave, he—Mr. Raitt—estimates that a 7,000 ton plant at pre-war rates would cost about £65,000 as against £110,000 for the larger unit. Naturally with the smaller factory certain items of the working costs per ton would have to be increased.

Should there not be a ready sale in Calcutta itself for all the pulp produced it stands to reason that the only outside market to look to would be situated further East, i.e., further away from existing competitive supplies. In this way only would the extra freightage from Calcutta be balanced. Taking the estimated cost of production as Rs. 109-8-0 landed Calcutta and the competitive imported rate for wood pulp as Rs. 135 (£9) we have a margin of Rs. 25-8-0 per ton.

A gross profit of 10 per cent. on the Capital means Rs. 23 per ton so that there is little to come and go upon.

Two possibilities present themselves, however, to the investor, either of which would greatly improve prospects, viz.:—

- (a) A general increase in rate for cheap competitive pulp.
- (b) Improvement in quality of grass when cropped regularly.

A. B. HAWKINS.

*Postscript.*

Since writing the attached I have received Mr. Pearson's report (date November 1916) of the grass areas he had cut in 1915. I note therefrom that he is quite pleased at the growth and at the improved appearance of the Khagra crop. I note that the grass has been sent to Calcutta again for conversion into paper. It will be interesting to see whether the apparent improvement is of practical importance.

There is but one point in this report which puzzles me. Mr. Pearson refers to "Khagra" being cut on a three-year rotation whereas I have been allowing for that of two years. This makes a difference with regard to areas required.

I also think it would be of interest to note that the present price of wood pulp is as high as £40 per ton as against £8 in pre-war days.

A. B. HAWKINS.

## No. 14.

### Government of Bengal.

*Letter, dated 5th June 1924, from the Government of Bengal, forwarding replies to questionnaire No. 11.*

I am directed by the Governor in Council to refer to your letter No. 352, dated the 1st May 1924, in which you ask for detailed information on certain

points concerning existing conditions relating to the manufacture of machine-made paper and paper pulp and the prospects of the future development of the industry in this Province.

2. In reply, I am to say that detailed information on all points is not available and cannot be collected without making a systematic investigation, which would involve delay. I am, therefore, to furnish what information is available at present.

*Paragraph 3 A (1) of your letter.*—Except in the Chittagong Hill Tracts there is no suitable supply of material for the manufacture of paper pulp in Bengal. In 1919, a preliminary investigation was carried out in the Kasalong reserve in the Chittagong Hill Tracts by Messrs. Pearson, Gibson and Modder of the Forest Department and a representative of Messrs. Nelson & Co. They estimated that a yield up to a maximum of 250,000 tons of crushed bamboos could be expected. Subsequent results have, however, shown that the above estimate was very optimistic.

Recently a kind of grass called *Ekm* grass growing on both sides of the Feni river in the Chittagong district, came to the notice of the Department of Industries. It appeared to be suitable as a raw material for making paper pulp. It has been examined by the Forest Economist, Dehra Dun, and well reported on, but no detailed survey of the area or estimate of the quantity of grass that can be exploited annually has as yet been made.

Paper pulp made from rice straw was also sent for examination to the Forest Economist and was well reported on. If collection can be properly organised it is possible that this material, which is available in abundance in Bengal, may be utilised for making paper pulp.

*Paragraph 3 A (2) of your letter.*—Extraction of bamboos from the Kasalong Reserve is easy as there are numerous small streams falling into the River Karnafuli which goes down to the Port of Chittagong.

*Paragraph 3 A (3), (4) and (5) of your letter.*—No information is available at present.

*Paragraph 3 A (6) of your letter.*—The Titaghur Paper Mills and the Bengal Paper Mills are the only paper mills in Bengal. The former was started at Titaghur near Calcutta in 1882 and the latter at Raniganj in 1889. Both these mills use grass and imported wood-pulp. The mills obtain their supply of grass from Bihar and Orissa. The operations of these mills have been outlined in "Report on Timbers and Paper Materials" (Imperial Institute), 1921. The India Paper Pulp Company, Limited, of which Messrs. Andrew Yule & Co., Ltd., are the Managing Agents, extract bamboos from the Kasalong Reserve and send them to a crushing mill, where they are crushed and baled. The mill was first situated at Chittagong, but has been moved 19 miles up the Karnafuli river. The crushed bamboos are sent by train to the Pulp Factory, constructed at Nuihati near Calcutta.

*Paragraph 3 B (1) (a) of your letter.*—In 1920 a lease for the extraction of bamboos from the Kasalong Reserve was granted to the India Paper Pulp Company, Limited, mentioned above. They got the bamboos free of royalty for the first two years from the 1st January 1920. From the 1st January 1922 to the 31st December 1931, they are to pay royalty at Re. 1 per ton of crushed and baled bamboos leaving the crushing mill, with a minimum of Rs. 10,000 per annum. From 1932 to 1941, the royalty rises to Rs. 2 per ton with a minimum of Rs. 15,000.

*Paragraph 3 B (1) (c) of your letter.*—A copy of the agreement with the Company mentioned above, is enclosed. The conditions seem to be suitable and are likely to be followed in future with such modifications as may be considered necessary.

*Paragraph 3 B (2) of your letter.*—Before the lease was granted there was some local opposition due to the fear that the supply of local needs would be endangered. Clause 5 of the agreement provides sufficient protection against the above contingency.

To a large extent the people of the Hill Tracts make their living by the cutting and extraction of forest produce and the grant of the lease should be of benefit to them. Up to date, however, the Company has not been fortunate in its agents and has not got the full benefit of the large supply of labour which is available.

3. I am to add that as stated above, the other questions cannot be answered without making further enquiries and that it has not been possible to have maps illustrating the replies to questions A (2), A (4) and A (6), prepared within the short time allotted in paragraph 4 of your letter under reply.

4. I am also to say that the publications collected by the Tariff Board do not appear to be exhaustive; a further list is annexed herewith.  
Enclosure I.

**AGREEMENT.**

**AN AGREEMENT** dated the    one thousand nine hundred and twenty made between the Secretary of State for India in Council (hereinafter called "the Secretary of State") of the one part and India Paper Pulp Company, Limited, having its registered office at 8, Clive Row, Calcutta (hereinafter called the Lessees which expression where the context so admits or implies shall include its successors and assigns) of the other part.

1. The Secretary of State hereby grants to the lessees liberty to enter upon the Kasalong Reserved Forest situated in the Chittagong Hill Tracts Forest Division, and to cut and remove therefrom bamboos of all kinds with the exception of *Ternstrochium Dnloo* commonly called Dnloo, such bamboos to be crushed and prepared at a factory or factories at Chittagong, the site of which shall hereafter be determined by mutual agreement between the Conservator of Forests, Bengal, and the lessees.

2. Government may cut and remove all bamboos that may be required by Government for civil or military purposes or for the requirements of the Public Works or Forest Department, and the lessees shall not in any way interfere with the servants of Government engaged in the work of cutting and removing such bamboos.

3. The lessees shall work through the area regularly and systematically in such manner and on such rotation which shall not be less than three years as shall be approved by the Conservator of Forests, Bengal, and shall remove all butts and tops as well as the central portions of the culms of the bamboos.

4. The lessees shall not hinder or prevent any person or persons holding permits duly issued by the Forest Department authorizing them to cut *Teinostachyum Dullooa* bamboos in the area subject to this agreement.

5. The Conservator of Forests, Bengal, if in his opinion the requirements for bamboos of the inhabitants of the area served by the Kasalong and the Karnafuli rivers from Mainimukh to Rhyinkhyong Mukh cannot be fully satisfied by other sources of supply, shall have the power to arrange for the removal of a number sufficient for this purpose out of the Kasalong Reserve, and the lessees shall give the holders of permits given under this clause full facilities for the cutting and removal of bamboos.

In the event of Daloo bamboos flowering during the period of this license the Conservator of Forests, Bengal, shall have power to arrange for the removal of such number of bamboos of any other species as may be in his opinion required for the purpose of floating timber provided that this quantity shall not exceed the average amount of Daloo bamboo extracted by local consumers during the previous five years.

The Conservator of Forests, Bengal, will be at liberty to prohibit the sale to the Company of bamboos from areas in the districts of Chittagong and the Chittagong Hill Tract should there be at any time, during the period of the lease, an insufficient supply of bamboos for the domestic requirements of the people of those districts.

6. The lessees shall not cut or remove any timber from the said Reserve except as provided in clause 12 hereof.

7. The lessees shall pay royalty at the following rates:—

*Nil* for two years commencing from 1st January 1920.

From 1st January 1922 to 31st December 1931, Re. 1 per ton of crushed and baled bamboo leaving crushing mills, and Rs. 2 per ton for the remaining years of the license provided that in the event of the said royalty payable under this clause being less in any year from 1922 to 1931 inclusive than Rs. 10,000, the lessees shall pay such sums as will with the royalty paid on bamboos actually crushed and baled during such year, make up the sum of Rs. 10,000, and so during the years from 1932 to 1941 inclusive, except that the minimum royalty shall be Rs. 15,000. In the event of the flowering of any species of bamboo in the said Reserve in any year the provisions of this proviso shall not apply.

8. The lessees shall commence work before 1st January 1921, and shall on or before that date erect and supply all necessary machinery and plant to the satisfaction of the Conservator of Forests, Bengal, and in the event of their failing so to do the Secretary of State may without prejudice to any other right or remedy hereunder forthwith by notice in writing to the lessees determine this agreement.

6. The lessees shall collect the bamboos cut from the Reserve at such checking station outside the boundaries of the reserve as the said Conservator of Forests shall approve, where the bamboos will be enumerated and the number and species entered in a challan by a Forest Officer in the presence of an officer of the lessees. If they shall so require on production of this challan, free passing down of the rafts by the checking stations on the way will be sanctioned. At the crushing mill the rafts will be checked with the challan by a Forest Officer in the presence of an officer of the lessees. The royalty on any bamboos lost in transit or not forthcoming at the final checking station shall be forthwith paid by the lessees on demand at the prevailing scheduled rate. In the event of the lessees bringing to the mill bamboos not extracted by them but purchased in the open market they shall be entitled to claim rebate of royalty at the prevailing schedule rates on such bamboos. The lessees shall not before payment of the royalty mentioned in paragraph 7 sell any bamboos or otherwise dispose of them, except by using them in the crushing mill.

10. The lessees shall provide every person employed by them in cutting, collection and transport of bamboo with a suitable badge for the purpose of identification.

11. The lessees shall abide by and observe the forest rule in force for the time being in the said reserve, and should there be any neglect of the said rules by the lessees or by any of their employees the Divisional Forest Officer shall have power, in case of urgent necessity, at once to suspend during such time as he shall think fit, the work of the lessees or their employees in any such locality.

12. The lessees shall be entitled to procure from the said reserve such building stone, timber and other forest produce as they may require for the purposes of this concession on payment of half the royalty in force for the time being as embodied in the published schedule of rates of the Chittagong Hill Tracts Division. All trees required by the lessees shall be first approved and marked by a Forest Officer, and the lessees shall not fell any tree which is not so marked.

13. The lessees shall be allowed the free use of water from any streams within the Reserved Forests with the previous consent in writing of the Conservator of Forests, Bengal, provided that the use thereof shall not, in the opinion of the Conservator, at any time be prejudicial to any pre-established rights of any village, or of any other persons and provided that the water habitually used by such persons shall not be polluted and that due

precautions be taken by the lessees to the satisfaction of the said Conservator to prevent any water in any way being polluted by their machinery or by the crushing of the bamboos and provided that the lessees shall make all such dams, tanks, water-channels and the like as shall in the opinion of the Divisional Forest Officer be necessary for the carrying out of their work in a secure and proper manner, and so as to minimise the risk of their causing landslip, floods, or soil erosion, and that if in the opinion of the Divisional Forest Officer all proper precautions are not at any time being taken to effect any or all of the said purposes, the Divisional Forest Officer may prohibit the use of such water by the lessees until such precautions have been taken.

Provided that nothing contained in this clause shall permit the lessees to do any act specified in sub-section (b) of section 76 of the Bengal Embankment Act, 1882 (Bengal Act II of 1882), without the previous permission of the Superintendent of the Chittagong Hill Tracts.

14. The lessees shall not erect any building nor clear sites for buildings or other purposes inside the Reserved Forest without the previous consent in writing of the Conservator of Forests. For all such ground as shall be made available for clearing for building and other purposes, ground rent at the rate of Rs. 5 per acre per year shall be paid in advance.

15. Subject as hereinafter mentioned this agreement shall continue in force for a period of 21 years from 1st January 1920 to 31st December 1940.

16. The lessees may terminate this agreement at any time before the expiry of the said period by giving notice to that effect in writing to the said Conservator on or before the first day of the year previous to the year in which they desire so to terminate this agreement.

17. In the event of the lessees failing to comply with any of the terms of this agreement as to which the opinion of the said Conservator shall be absolutely final and conclusive, or in the event of the lessees becoming insolvent or going into liquidation (except for purposes of reconstruction), it shall be lawful for the Secretary of State by notice in writing to the lessees under the hand of the Secretary to the Government of Bengal in the Revenue Department, and notwithstanding any previous breach, to terminate this agreement at any time without prejudice to any other right or remedy of the Secretary of State hereunder.

18. In the event of this agreement being terminated under clause 16 or on the expiry of this agreement on the 31st December 1940, the lessees shall be entitled to remove within the next succeeding six months all machinery and other stores, tools and plant and pulp or other forest produce on which royalty has been paid in full.

The lessees shall also be entitled to remove within the same period such timber and forest produce obtained under clause 12 of this agreement at half the scheduled rates on payment of the balance required to make up with the sums already paid, the full scheduled rates then in force. On the expiry of the said period of six months it shall be lawful for the Secretary of State to appropriate such machinery, stores, tools and plant, buildings timber and firewood, as may remain in the said area without payment of any compensation to the lessees, and such machinery and other things shall become the property of the Secretary of State.

19. In the event of this agreement being terminated under clause 17 it shall be lawful for the Secretary of State to appropriate such machinery, stores and plant, buildings, pulp and other forest produce as may, in his opinion, be necessary to cover all loss and damage incurred by him and to dispose of the same as his own property.

20. In the event of the lessees' wishing to continue working for a further period after the lapse of the twenty-one years specified in clause 15 above, they shall be given preference to do so under such terms as may then be determined by mutual agreement of both parties.

21. The rights of the lessees under this agreement may be assigned by the lessees to any company registered in India, the capital of which is offered for

subscription in India, provided always that the company is not a foreign-controlled Company as defined in the Government of India's Notification No. 11917, dated the 6th October 1917, and provided also that such assignment shall be registered with the Conservator of Forests, Bengal.

22. In the event of any dispute arising with regard to the terms of these presents or the construction of meaning thereof or of any part thereof, or as to the performance of any act thereby required to be done, or as to any other matter or thing in connection therewith where not otherwise provided for, the decision of the Governor of Bengal in Council upon the matter of such dispute shall be final and binding upon the parties hereto.

## Enclosure II.

AN AGREEMENT, dated the one thousand nine hundred and twenty, made BETWEEN THE SECRETARY OF STATE FOR INDIA IN COUNCIL (hereinafter called "the Secretary of State") of the one part and the India Paper Pulp Company, Limited, having its registered office at 8, Clive Row (hereinafter called the Lessees which expression where the context so admits or implies shall include its successors and assigns) of the other part. Whereby it is agreed that the following clause shall be substituted for clause 16 of the within written agreement dated 1920.

"16. The Lessees may terminate this agreement at any time before the expiry of the said period by giving 12 calendar months' notice to that effect in writing to the said Conservator."

And the within written agreement shall be read and construed accordingly.

IN WITNESS whereof the vendors have hereunto set and affixed their respective hands and seals and the company has caused its common seal to be hereunto affixed the day and year first above written.

Signed sealed and delivered by the above-named in the presence of

The common seal of the abovenamed has herunto been affixed by the direction and in the presence of

two of the Directors of the said Company who have hereunto set their hands and these presents have been countersigned by

in the presence of

## No. 15.

### Government of Madras.

*Letter, dated 25th June 1924, from the Government of Madras, forwarding replies to questionnaire No. II.*

With reference to your letter No. 352, dated the 1st May 1924, regarding the Tariff Board's enquiry into the case for the protection of the paper industry, I am directed to enclose a copy of letter No. 410-A./24, dated 4th June 1924, from the Director of Industries, Madras, which furnishes all the information at present available on the subject. In regard to his reference to the attempts of the Forest Department to explore the possibilities of the bamboo areas under its control for the manufacture of paper and paper pulp, I am to state that the work done in this direction has so far been only preliminary and that no estimates of practical propositions have yet been worked out.

*Copy of letter No. 410-A./24, dated 4th June 1924, from the Director of Industries.*

With reference to Government endorsement No. 1400 II/24-1, dated the 9th May 1924, referring for report a questionnaire on the paper industry of the Tariff Board, I have the honour to report that my department has made no investigation of the possibilities of establishing a paper and paper pulp industry in the Presidency. Dr. Marsden's bulletin which the Tariff Board has already contains the latest information available on the subject. I understand that in 1922-23 it was agreed that the Forest Department should explore the possibilities for these purposes of the bamboo areas under the control of that Department and I learn from the Chief Conservator that some preliminary work in this direction has been done in the extensive Eeta (Ochlandra Travancorica) areas of the Papanasam forests in Tinnevely. I am, therefore, not in a position to give any accurate information regarding the sources of supply of pulpable material and fuel. I can say generally that grasses are not available in sufficient quantities to repay exploitation and that bamboo and the Eeta reeds are the most likely materials.

There are no data available regarding the quantity, kind and cost of fuel. Any inland mill must depend on wood fuel; except at sea ports the cost of coal would be too high. As regards lime, up to date no lime has been manufactured from quarried limestone and the only lime in use is shell lime. This office has no figures as to cost.

The question of location of paper mills is one of great difficulty in this Presidency. The only raw materials available in quantity are wood and bamboos; as these are situated inland and there is very little water transport, the cost of transport of all other requisites will necessarily be high. It is, therefore, doubtful in my opinion whether any mill located away from the seaboard can operate with success even under the protection of a high tariff. There is only one mill established in the Presidency, the Carnatic Paper Mill. The mill is located at Rajamundry where water transport is available and it is intended to make pulp from bamboos believed to be available in quantities and paper from paddy straw of which also large quantities are believed to be available. But the mill has not yet started and the company's estimated cost of making paper, Rs. 280 per ton, seems to me to be high. The Company has sited its works in what is at present probably the best area in the Presidency. As the mill has not started work, it is not possible to give any figures as to the cost or the supply of labour, but there is no reason to believe that there will be any difficulty in getting sufficient labour.

*Regarding Questions B (1) (a) - (c).*—I have no information to offer. The Carnatic Mills have applied under the State Aid to Industries Act for concession rates for timber, bamboos and water and until Government pass orders on their application, it is obviously impossible to state what concessions will be granted and the conditions governing those concessions. But I do not think that there will be any local prejudice against the grant of such concession if Government decide to grant any.

*Question C.*—The condition of transport and cost of freight is so vague that I can offer no kind of reply.

*Question D.*—The local demand for machine-made paper may be estimated at 5,551 tons valued at Rs. 34 lakhs which represents the value of the annual imports into the Presidency.

*Question E.*—It will be obvious from the above that the paper industry is still non-existent.



## No. 16.

## Government of the Punjab.

*Letter, dated 2nd June 1924, from the Government of the Punjab forwarding replies to questionnaire No. 11.*

With reference to your letter No. 352, dated the 1st May 1924, calling for certain information in regard to the proposal to protect the paper industry, I am directed by the Punjab Government (Ministry of Agriculture) to reply below serialum to the questions raised in your letter:—

A. (1) The Department of Industries reports that suitable grass for the manufacture of paper exists in large quantities in the vicinity of Jagadhri station on the North Western Railway in Government and private forests. The grass growing in the Government forest area has been leased to a syndicate which is endeavouring to raise a Company to erect a paper mill to use this grass as their raw material. The grass has been tested for paper pulp at the Forest Research Institute, Dehra Dun and found to be eminently suitable. Information regarding bamboo or other forest materials for the manufacture of paper pulp is being obtained from the Chief Conservator of Forests and will be communicated as soon as possible.

A. (2) The source of supply of the grass mentioned above is roughly about 15 miles to the north of Jagadhri station and the raw material is thus easily accessible.

A. (3) If the paper factory matures it is proposed to use electric power from the River Jumna instead of fuel.

A. (4) Lime is obtainable in the vicinity at about Re. 1-12-0 and Rs. 2 a maund.

A. (5) It is anticipated that there will be no difficulty about the supply of labour in this area. The wages of unskilled men will probably be between 8 and 12 annas per diem.

A. (6) (a) A suitable site for the location of the paper mill has been found in the vicinity of Tajawala, the headworks of the Eastern and Western Jumna Canals.

A. (6) (b) No paper mills have so far been erected in this province.

B. (1) (a) It is not proposed to charge any royalty at present. A fixed sum as annual rent for the grass collected from the Government area has been arranged.

B. (1) (b) One concession, as mentioned above, has been granted to utilise the grass from the Punjab Government forest area at Kalesar.

B. (1) (c) The conditions governing the concession are being obtained from the Chief Conservator of Forests and will be intimated as soon as possible.

B. (2) There is no local sentiment against the grant of this concession, as far as is known.

C. The chief means of transport will be by boat on the Eastern Jumna Canal to the railway station at Jagadhri; the cost of freight is not known at present.

D. It is not possible to give accurate figures regarding the extent of the local demand for machine-made paper, but it is known to be large. The Internal Trade Report of the Punjab for the year ending 1921-22 shows that 5,664 tons of paper were imported into the Punjab.

E. Beyond granting the syndicate the concession mentioned above no further progress has been made. It remains to be seen whether the syndicate will succeed in floating this Company.

2. As only one place has been mentioned in this letter, and it can easily be located on a map of the Punjab, the submission of a special map will perhaps not be considered necessary.

*Further replies to questionnaire, received from the Government of the Punjab,  
dated 16th July, 1924.*

In continuation of my letter No. 800-27—7608, dated 2nd June, 1924, I am directed to communicate the additional information promised under questions A (1) and B (1) (c):—

A. (1) The Chief Conservator of Forests, Punjab, reports that, apart from grass, the only forest materials available for the manufacture of pulp and paper in the Punjab are fir and spruce wood. Both fir and spruce are found in large quantities throughout the higher hills of the Punjab, but the cost of extraction of the material is likely to be prohibitive for some time to come.

B. (1) (c) A copy of the agreement governing the concession is enclosed. The period of six months allowed in clause 18 has been extended up to 4th November 1924, owing to difficulties in the supply of water-power, and may have to be still further extended. With reference to the reply to question B (1) (a) attention is invited to clause 7 of the agreement under which royalty bond on the amount of grass extracted is payable after the first two years.

Enclosure.

MEMORANDUM OF AGREEMENT made the twentieth day of November one thousand nine hundred and twenty-two between the Secretary of State for India in Council (hereinafter called the Secretary of State which term includes his successors and assigns) of the one part,

And Lala Kashi Ram of the Firm of Messrs. Newal Kishore Press Limited, Lahore, also known as Kashi Ram Press, Lahore (hereinafter called the Lessee which term includes his assigns, heirs, executors and administrators) of the other part.

Whereas for the purpose of manufacture of paper, the Secretary of State has agreed to grant and the lessee has agreed to accept, the exclusive license, right and privilege to cut, collect, store, remove, appropriate and otherwise dispose of, cultivate, harvest and improve a kind of grass known as *Bhubhar* grass growing in the Kalesar Reserved Forest, Ambala Division, Punjab, covering a total area of about 11,000 acres, more or less (hereinafter referred to as the said area and shown red in the plan annexed). And also to remove in any year from the said area other species of grasses for experimental purposes not exceeding 100 tons in weight and more particularly described in the Schedule, hereto annexed and which license right and privilege is hereinafter referred to as the said concession upon terms and conditions as hereinafter mentioned.

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS.

1. That the Secretary of State hereby grants to the lessee the said concessions together with all rights, privileges, facilities, and easements reasonably necessary for the complete enjoyment and exploitation of the said concession for a term of twenty-five years commencing with effect from 1st April 1923.

2. The Secretary of State undertakes not to close or reduce by any means whatsoever the said area during the continuance of the said concession without the grant of compensation or of an equivalent area at the option of the Secretary of State.

3. That the Secretary of State guarantees that during the said period of 25 years no contractor or licensee of the Forest Department or other person employed or authorised by the Forest Department entitled to forest produce or any Forest Officer or servant shall be allowed to burn or damage the said grass in the said area and do any act or thing calculated to cause loss

or damage to the lessee except in so far as burning is required to keep the fire lines in the Forest clear, but the Secretary of State shall not be responsible for any damage done by any person whether a servant of the Secretary of State or not without the express consent or orders of the Secretary of State.

4. That at the option of the lessee and after the expiration of a year's notice and subject to the terms and conditions herein contained and during the unexpired period of the said 25 years the Secretary of State hereby agrees to charge the lessee for other species of grasses than the said *Bhabbar* grass at such rates not exceeding the basic rates as hereinafter referred to in clause nine as hereinafter mentioned and mutually agreed upon.

5. That at the expiration of the said 25 years the Secretary of State hereby agrees to grant at the option of the lessee the said concession for another period of twenty-five years on terms and conditions herein contained at rates not exceeding the rates stated in clause 7 (c) hereafter mentioned. Such option to be exercised before the expiration of the first mentioned 25 years.

6. That the lessee hereby agrees to deposit the sum of Rs. two hundred only in Postal War Loan Certificates as security with the Secretary of State for the due fulfilment by him, his agents and servants of all the terms of this agreement and in the event of a breach of any term of this agreement the said deposit or any portion thereof shall be forfeited to the Secretary of State.

7. That the lessee hereby agrees to pay to the Secretary of State royalty on the following scale:—

(a) A sum of Rs. 1,600 yearly by two instalments, one of Rs. 800 on the 15th November and the other Rs. 800 on the 15th March for the first two years.

(b) From the third to the tenth year both inclusive, a sum of money calculated at the basic rate, as contained in clause 9, every year on the 15th of November and 15th of March.

(c) From the 11th to the 25th year, both inclusive, a sum of money at the basic rate to be increased in direct proportion to the net profits as declared in the statement referred to in clause 10 but only in respect of profits exceeding 20 per cent. in any one year on the paid up capital, i.e., if the profits are 50 per cent. the basic rate will be increased by 30 per cent.

8. The Secretary of State and the lessee mutually agree to maintain proper books showing the total amount of the said *Bhabbar* grass and other grasses removed by the lessee from the said area. Such books will be kept for the financial year and the procedure will be regulated under clause 17. Should the two sets of books not tally the decision of the Chief Conservator of Forests shall be final.

9. That the parties mutually agree that for the purpose of fixing the amount of royalty payable after the first two years an average price of the *Bhabbar* grass per maund will be ascertained by dividing the number of maunds removed during the said two years into the amount of royalty payable for the said period as fixed in sub-clause (a) of clause 7, e.g., 38,400 maunds of grass are extracted during the first two years the basic price is  $\frac{3,200}{38,400}$  Rs. =  $\frac{1}{12}$  of a rupee = 16 pias per maund. The average price per maund so ascertained is to be called the basic rate.

10. The lessee hereby undertakes to furnish the Secretary of State with a true copy of his Balance Sheet and Profit and Loss Account as audited by a Chartered Accountant for the purpose of determining the Royalty after the expiration of two years.

11. That on the expiration of the said term of 25 years the lessee hereby agrees that he shall have no claim to the *Bhabbar* grass or other grasses growing or standing in the said area.

12. That on the expiration of the said term of 25 years the lessee hereby agrees that he shall remove all *Bhabbar* grass and other grasses, cut, collected or stored by him within the said area.

13. That the lessee hereby agrees to supply to the Secretary of State a complete list of his agents before the commencement of his work in the said area under the agreement and to intimate from time to time their removal or transfer and of new appointments in their places.

14. The lessee hereby agrees that he shall be responsible for the acts of his agents, servants or coolies employed on the work and shall be personally responsible for damage caused negligently or deliberately in the course of such employment.

15. That in the event of fire breaking out in the said area by any cause whatsoever the lessee, his agents, and servants present, where the work is carried on, shall at once proceed to the scene of fire and shall do their best to extinguish the fire or to assist in extinguishing it.

16. That the lessee hereby agrees that he will not claim any compensation caused by any accidental fire or authorised exploitation of timber by contractors of Forests.

17. It is hereby mutually agreed that for the proper working of the lease and carrying out the terms of this agreement and for the cutting, collecting, storing, removing and weighing of the said *Bhabbar* grass and other grasses, rules will be framed by the Divisional Forest Officer of the Simla Forest Division and the said lessee, as may be agreed upon. Such rules may from time to time by mutual consent of the said Divisional Officer and the said lessee be altered, modified and cancelled.

18. The lessee hereby undertakes within six months of the signing of this agreement to register a company for the establishment of a paper mill to deal with and manufacture the products of the said concession. The lessee further undertakes that orders for complete machinery for the establishment of an electric power house and a paper mill on a scale suitable for the purposes of the said concession shall be placed with manufacturers of machinery for these purposes within a period of one year from the signing of this agreement. The parties hereby agree that the arbitration provided in clause 22 of this agreement shall not apply to the undertakings on the part of the lessee in this clause contained, but that the lessee shall not be deemed to have complied with the conditions of such undertakings unless and until he shall have satisfied the Director of Industries, Punjab that he has substantially and *bona fide* complied therewith (the obligation in this behalf resting solely with the lessee). It is further agreed that if the said Director of Industries is not satisfied within each of the above-mentioned periods that the conditions of each of the said undertakings has been duly complied with the said concession shall thereupon absolutely cease and determine and all rights hereby granted shall thereafter be of no force or effect, but the lessee shall be liable for all payments or obligations due thereunder down to the date of such determination as aforesaid and the Secretary of State shall not be liable to compensate the lessee for any expenditure or loss made or incurred in connection with the said concession or due to the aforesaid determination.

19. It is hereby agreed by the parties that any stamp duty or other charges payable in respect of this agreement shall be borne by the Secretary of State.

20. It is further agreed by the parties that this agreement is for the performance of act or acts in which the public is interested within the meanings of section 74 of the Contract Act, 1872.

21. The lessee shall have the right of transfer of this agreement subject to the approval of the Secretary of State, in so far as suitability of the parties taking over the concession is concerned.

22. It is mutually hereby agreed that in the event of any doubt difference or dispute arising between the parties, it shall be referred to the arbitration of the Commissioner of Ambala Division and another person to be appointed by the lessee who before entering upon their duties as Arbitrators, will nomi-

nate an Umpire. If the Arbitrators are not unanimous in the award, the matter will be decided by the Umpire.

IN WITNESS whereof the Secretary of State for India in Council and Lala Kashi Ram have hereunto set and subscribed their respective hands the day and year first above-mentioned.

Signed and delivered on behalf of the Secretary of State for India in Council by E. R. Abbott, Esq., C.I.E., I.C.S., Financial Commissioner and Secretary to Government, Punjab (Development Department) under the authority of the Punjab Government in the presence of—

1. (Sd.) A. A. L. ROBERTS. }  
2. (Sd.) J. F. MEEHAN. } Witnesses.

(Sd.) E. R. ABBOTT,  
Financial Commissioner and  
Secretary to Government, Punjab,  
(Development Department.)

Signed and delivered by Lala Kashi Ram in the presence of—

1. (Sd.) BARKAT RAM.  
2. (Sd.) B. R. SHARMA. } Witnesses.

(Sd.) KASHI RAM.

#### SCHEDULE REFERRED TO.

The Lease referred to in the Memorandum of agreement includes the exclusive license right and privilege to cut, collect, store, remove, appropriate and otherwise dispose of, cultivate, harvest and improve a kind of grass known as *Bhabbar* grass growing and situate in the Kalesar Reserved Forest, Ambala Division, Punjab, covering a total area of about 11,000 more or less acres and delineated and marked red in the plan hereto annexed.

Also to remove in any one year from the said forest other species of grasses for experimental purposes not exceeding one hundred tons in weight.

Together with all other rights, easements, facilities, licenses for the purposes of enjoyment and exploitation of the rights hereinbefore stated of this Lease.

## No. 17.

## Government of the United Provinces.

Letter, dated 24th July 1924, from the Government of the United Provinces forwarding replies to questionnaire No. II.

I am directed to refer to your letter No. 352, dated May 1, 1924, about the protection of the paper industry. The provincial Director of Industries has been consulted, and I am now to supply such information as is available, in reply to the questions which you have put. The numbers given to the questions below are those adopted in your letter.

2. Question A (1).—Grasses of two kinds—*Baib* (alias *bankas* or *bhabar*) and *ullah*—are the principal raw materials available in this province for the manufacture of paper. *Baib* grass grows freely in forests at the foot of the hills, and *ullah* in sub-montane districts throughout the province; but it is difficult to estimate even approximately the total quantity of either. The Director of Industries is of opinion that the quantity of *baib* alone is sufficient to provide for the requirements of at least two large paper mills; this estimate is probably correct, but much of this grass grows where it cannot easily be reached and therefore cannot be utilised. *Baib* is known to be suitable for papermaking. The flowering culms of *ullah* are also suitable for the purpose; but the pulping of the culms alone is not a practical proposition and it will probably not be possible to make much use of *ullah* until it can be pulped in bulk along with other forest grasses. So far as this Government are aware, only *baib* is at present converted into paper; a very considerable quantity of this grass is collected under the leases referred to in the reply to Question B (1) (a) below.

As regards other materials, bamboo is suitable, but owing to the demand for it for other purposes could probably not be obtained in any large quantities. The Lucknow Paper Mills at one time tried to make pulp out of it, but failed, chiefly perhaps for lack of proper machinery.

Other possible materials are *dhob* grass, *moonj*, *savana* grass and *magasse*, and *kans* and *kanwal*. The Director of Industries remarks about each of these as follows:—

"*Dhob*.—A new grass, namely *dhob*, was brought to the notice of this Department by Rai Ishwar Sahai Bahadur of Fatehpur. It was reported that this grass grew on at least 2,000 acres of land in that district. Samples were examined in the departmental laboratories, where the grass was found to yield about 40 per cent. of pure cellulose. Large scale experiments on this raw material have not yet been undertaken."

"*Moonj*.—The results of the industrial survey recently completed by the Department in these provinces show that about 25,000 acres of *moonj* are available in the Ganges khadir in the Etah District. Mr. Raitt of the Forest Research Institute, Dehra Dun, regards *moonj* as a suitable grass for paper manufacture. But *moonj* is in such great request for thatching purposes, for making rope, and for other domestic uses in these provinces, that I very much doubt if it could be obtained at a sufficiently low price for the manufacture of paper. *Moonj* is grown practically all over the province, but owing to extension of cultivation the quantity grown in most districts has decreased and the price has risen. Agriculturists are finding it increasingly difficult to obtain *moonj* for domestic purposes at a reasonable price."

"*Savana* grass and *magasse*.—It seems unnecessary to deal at length with *savana* grass and *magasse* (sugarcane after the extraction of juice, a present used as fuel), because these are still the subject of factory scale investigation."

"*Kans* and *kanwal* are regarded by Mr. Raitt as suitable grasses for the manufacture of paper; but I am not sure if these grasses are available in sufficiently large quantities and in sufficiently compact areas for the manufacture of paper."

Other difficulties apart, it will probably not be feasible to utilise the materials mentioned above, unless it is found possible to pulp grasses in

bulk—a matter about which Mr. Raitt is, this Government understand, enquiring.

The Director has suggested that it might be possible to utilise certain timbers, such as silver fir and spruce, which grow in abundance in these provinces. He said: "The suitability of certain timbers for the extraction of pulp has been investigated, and silver fir and spruce from the Himalayan forests were found to be suitable for the purpose and to be available in sufficiently large quantities. It has been suggested by the Industrial Chemist that water transport is the only means of removing the wood to mill sites, for which Dakhpathur, Kalshi, and Jagadhri are regarded as the most suitable places. He tells me that wood can be delivered at these places at a price not exceeding four annas per cubic foot, which is considered an economical price of wood for conversion into pulp. Dakhpathur is about 28 miles from Dehra Railway station, and if ropeway communications were established, transport between the two places would be inexpensive. Wood brought down by water transit could be placed upon the railway at Jagadhri."

The suggestion to utilize these timbers does not, however, appear to be feasible. This Government are advised by their forest officers that the cost of transport to the places named would be at least double that mentioned above.

*Question A (2).*—The sub-montane districts in which *baib* and *ullah* grasses grow are served by railways; but *baib* as already mentioned, grows at the foot-hills, at some distance generally from any stations. It would probably be advisable in starting a new factory to select a site in some convenient sub-montane district.

*Question A (3).*—Wood fuel can always be obtained, at fairly cheap rates, which differ in different localities. The only other possible fuel is coal; it costs from Rs. 10 to Rs. 16 per ton delivered in this province; the rate paid by the Lucknow Paper Mills is reported to be Rs. 14 per ton. Were mills established at Tulsipur and Mailani, as suggested by the Director (*vide* reply to *Question A (6) (a)* below), it would probably be found advisable to use wood, not coal fuel, since wood fuel is available in large quantities at both those places.

*Question A (4).*—The Director of Industries reports about this as follows:—

"Lime may be had from Katni or Dehra Dun. The supply from Katni should be abundant. Good limestone is also available in Dehra Dun district, to the extent of 1,050,000 maunds, at about annas eight per maund. The cost of Katni lime is Rs. 65 per 1,000 maunds *f.o.r.* Katni. The railway lead to Mailani and Tulsipur should not be prohibitive."

*Question A (5).*—The Director of Industries remarks about this as follows:—

"Sufficient labour would be available for a paper mill at places like Mailani and Tulsipur throughout the year, except perhaps in the rains, when labour, owing to poor road communications, is not very mobile. In districts other than sub-montane there should be no difficulty in attracting labour even in the rains. Annas eight per head per day would be attractive wages in sub-montane districts, and annas ten in other districts. Labour in the sub-montane districts is less efficient than elsewhere, but it is cheaper, and if annas ten per day were offered, it should be possible to attract adequate labour even in the rains. In short, the price of labour may safely be fixed for the whole province at annas ten per head per day at the outside."

*Question A (6) (a).*—The Director of Industries thinks that Mailani and Tulsipur, which are important railway centres on the Rohilkund and Kumaun Railway, and the Bengal and North Western Railway, respectively, would be suitable for the establishment of paper mills. These places are near

forests, and the supply of both fuel and papermaking grass there would be easy. It is doubtful, however, whether sufficient water is to be had at either place; and this Government are not prepared to endorse the Director's suggestion. They have not themselves examined the question of possible sites.

*Question A (6) (b).*—The only mills yet established in this province are the Couper Paper Mills, Lucknow. None of the sites selected by Mr. Pearson lies within the United Provinces.

*Question B (1) (a).*—No system of royalties is in force at present. Lease-money is, however, paid by Messrs. Heilgers and Company, the Managing Agents of Titagarh Paper Mills, for the right to collect *baib* grass from the Western and Eastern Circles of the Forest Department (*vide* reply to question B (1) (b)). The amount payable for the lease of the Western Circle is Rs. 77,500 per annum, and for the Eastern Circle Rs. 9,251 in each of the years 1922, 1923 and 1924, and Rs. 11,251 in each of the years 1925, 1926 and 1927.

*Question B (1) (b).*—This Government granted the Baib and Wood Pulp Manufacturing Co., Ltd., Lucknow, a lease for the extraction of *baib* grass from certain provincial forests in 1912; but this lease lapsed when the chief promotor of the company, Munshi Prag Narain, died. The only concessions at present in force are the leases granted to Messrs. Heilgers and Co., referred to in the preceding paragraph; the first of these expires in 1931 and the second in 1927.

*Question B (1) (c).*—For the conditions governing the only concessions which are operating at present, the reply to Question B (1) (a) may be seen. No other concessions have yet been proposed by this Government, and the conditions which should obtain in future have not been considered.

*Question B (2).*—There was considerable local jealousy at the time Messrs. Heilgers and Company secured the leases referred to above, but it has since died down, and there is no feeling upon the subject at present.

*Question C.*—Coolie and bullock cart transport is available for short distances, at varying but generally cheap rates, and railway transport for longer ones. The rivers of the districts which produce the principal raw materials in this province are but little suited to navigation, and water transport could not be largely used.

*Question D.*—The Superintendent of the Allahabad Government Press estimates that the provinces consume annually upon the average 6,000 tons of machine made paper, and thinks that it is likely that this consumption will increase with improved economic conditions and the spread of education. This Government accept this estimate and agree that the provincial demand for machine made paper is likely to rise; the use of hand made paper has quite gone out of fashion.

*Question E.*—There is only one mill in this province for the making of paper by machinery, *viz.*, the Upper India Couper Mills, Lucknow. The Superintendent of the Government Press reports about this Company as follows:—

“It possesses two machines, which are constantly employed, and turns out a good quality paper (the water-marked paper used in the District Courts is the product of this mill). Its financial position is very strong; it always pays a dividend, and the shares of the Company are quoted on the Calcutta market at more than double their paid-up price.” The Director of Industries advises, however, that the Company has not done particularly well lately; and this of course is the trend of the evidence which the Company's representatives have given the Board in their recent examination before them. The paper-making industry in this province may, this Government think, be considered to have passed experimental stage; the early successes of the Lucknow mills seem to establish this, even if it is the case that the mills have fared badly in recent years. More than this this Government do not wish to say; the evidence before them is not sufficient to justify their offering any opinion on the question of protecting the industry.



## Witness No. 18.

Messrs. R. S. PEARSON and W. RAITT.

A.—WRITTEN.

*Note on the position of the Paper Industry in India, prepared for the Tariff Board by Messrs. R. S. Pearson, C.I.E., and W. Raitt, of the Forest Research Institute.*

1. *Purpose of our experimental Plant.*—Ultimately, though probably at some years' distance, its object is to increase forest revenue by utilising forest products which are now classed as waste and useless—and it proposes to reach this end by smoothing the path of those who are bold enough to pioneer the industry. It probes into the most economical methods of conversion into pulp and relieves the pioneer of several of the serious risks to which all pioneering effort is liable. It does, for instance, completely wipe out and reject unsuitable materials and those which, although yielding good pulp, cannot be made to yield it at a profit and, with those which pass such tests, it will give accurate figures regarding percentage of pulp got from them and the principal costs of getting it.

The research side of the matter has been chiefly occupied during the last fourteen years with, 1st, rejection and elimination of unsuitable materials, and, 2nd, in endeavouring to reduce the bleaching costs of those which in other respects have been proved suitable. Bamboo, for instance, has been admitted for forty years to yield an excellent paper-making fibre in all respects, but that of colour and the cost of bleaching it has hitherto checked any serious effort to exploit it. It is gratifying to be able to state now that we believe we have solved this problem. As a result of laboratory investigation we have known for some years that we were on the right track but we have refrained from publishing any results until we were in a position to try out and prove the results on a commercial scale with digesters specially constructed to facilitate the process. This has now been done and with results somewhat unusual in such investigations. The large scale experiments actually yield better results than the laboratory tests. It happens to be one of those rare cases where *mass* tells beneficially. Results are better on a large scale than a small. We are now free to publish the figures and you are the first public body to receive this information and to see the new methods in operation. Reduced to figures it means that bamboo and grass pulps can be produced at 20 per cent. less than former costs taking these up to the bleached stage. The process has been inspected recently by a prominent paper-maker now operating in India and by an eminent Swedish pulp engineer and both describe it as revolutionary. We give you this information now in advance of our usual methods of publication because we think it may have some bearing on your enquiries as to the relief which the Indian paper trade may hope to obtain by the instalment of a pulping industry on modern lines. This will bring into use raw materials hitherto beyond its grasp, for we think it is an undoubted fact that the chief handicap to its success at present is the scarcity and high cost of its present limited range of supplies.

2. *Prospects of a Pulping Industry.*—The reason which is the foundation of the universal modern movement to separate paper-making into two branches, viz., pulp manufacturing and paper-making proper, is that by reducing the raw material to pulp *in situ*, in or near its area of growth, you eliminate 60 per cent. of waste and transport to the paper-mill 40 tons of pulp instead of 100 tons of bulky raw material. The Indian paper-makers themselves recognise that fact by importing about 12,000 tons annually of European wood-pulp—this to a country teeming with good raw material—but they must be incurring huge losses every year by transporting 100 tons of sabai grass instead of 40 tons of sabai pulp for distances of sometimes 900 miles. Sabai grass, however, is not an ideal material for pulping *in situ*. Its occurrence in the forests is scattered and thin and large areas have to be exploited for a comparatively

simal result in tonnage, and transport from forests to a pulping site would invariably be by cart or coolie load. Bamboo, on the contrary, can be found in solid continuous blocks under excellent conditions of water transport from forest to pulp factory and sea transport of pulp from pulp factory to paper-mill. In fact the transport conditions are frequently equal to if not superior to those enjoyed in Europe and America by the most ideally situated wood-pulping factories.

The world conditions of the industry are very favourable to its establishment in India for the reason that the rapid growth during the last twenty years in the demand for constructional timber has reduced the amount available for pulping and increased its prices and nearly all the most easily accessible Spruce and Fir areas have been exhausted. The sawmill is now a better market than the pulp mill and the timber required to produce one ton of pulp, in but rare instances, costs Rs. 105 (£7) per ton. Against this, bamboo will cost about Rs. 37-8 (£2-10). Bamboo has therefore a clear advantage in the prime cost of raw material of Rs. 67-8 (£4-10) per ton of pulp, or about 33 per cent. on the total cost of manufacture. No amount of criticism of our other items of cost can wash this out and even on these we stand unrepentant and maintain that they are based either on actual costs, or on items which—we are not yet sure of—are well covered by large margins of safety. Apart from raw material we have here some advantages in other costs owing to the very large increases of these which have occurred in Europe in recent years; in labour, for instance, which my latest advices indicate now costs in Sweden Rs. 35 to Rs. 40 per ton of pulp. In our Cuttack project estimates we put this—we think liberally—at Rs. 12 per ton inclusive of expensive European superintendence. Solely in deference to other opinion we would be prepared to raise this to Rs. 15 as it is one of the items which must at present be largely a matter of opinion rather than fact, but on no account higher, and even so it is clear that we have in this item a large advantage over wood-pulp. On the whole we cannot visualise a cost of more than Rs. 150 (£10) per ton for unbleached pulp free on rail or steamer at the place of manufacture. Against this, imported wood-pulp now costs about Rs. 240 with a sure prospect of being higher, and sabai grass pulp made at the paper-mills about Rs. 280. We therefore look for the salvation of Indian paper-making in following the now almost universal practice of making pulp in or near the forests and paper in or near its markets, i.e., the large centres of population.

In concluding these notes we wish to acknowledge with gratitude the assistance we have received in our research work from the Indian mills. They have invariably been most helpful and afforded us very assistance and facility in their power to give.

## FOREST RESEARCH INSTITUTE, DEHRA DUN.

B.—ORAL.

Evidence of Messrs. W. F. PERREE, Principal, R. S. PEARSON, Forest Economist, W. RAITT, Cellulose Expert, and Mr. BHARGAVA, of the Forest Research Institute, Dehra Dun, and of Mr. SUNDGREN, of the firm of Boving & Co., Ltd., Paper and Pulp Engineers, recorded at Dehra Dun on 1st August 1924.

*Mr. Pearson.*—Before you begin I should explain that I am not a pulp expert. I have only got a working knowledge, and I cannot claim to be an expert in the manufacture of pulp.

*President.*—Some of the materials used for the manufacture of paper in India might be described as waste products, *e.g.*, jute, waste paper and rags. Apart from these, the manufacture of paper in India has been dependent on the use of grass. The new factor which has recently appeared is the utilisation of bamboos for the manufacture of paper. There will be a good deal to say about that, but my opening questions will be directed to getting on the record a certain amount of information which has already been elicited informally. I understand that practically the only grass that has been utilised on a large scale hitherto in India is *sabai* grass.

*Mr. Pearson.*—Yes.

*President.*—What do you consider are the difficulties in the way of an expansion or development of paper manufacture in India so long as manufacturers are confined to the use of *sabai* grass?

*Mr. Raitt.*—The demand of the existing mills has outrun the economic radius from which *sabai* can be collected and no larger supplies are possible from that source without further increasing the already high cost of transport from the distant areas on which transport costs are now incurred. Any further expansion must result in higher costs.

*Mr. Ginwala.*—Mr. Raitt, we have examined the paper manufacturers on this opinion. Mr. Pearson gave evidence before the Fiscal Commission, and there he more or less expressed the same opinion. We put Mr. Pearson's opinion as it was expressed before the Fiscal Commission to the paper manufacturers.

*President.*—Before we get to that, have you seen the questionnaire that we issued to the paper manufacturers?

*Mr. Pearson.*—No.

*President.*—We asked this question. "If *sabai* grass is one of the primary raw materials used in your mill, do you agree with the following opinion expressed by Mr. R. S. Pearson before the Fiscal Commission:—

"Dealing with supplies, I do not agree that they (*i.e.*, the manufacturers) were correct in their statement. They have hardly got sufficient grass to work up to their full capacity. They could not increase 5,000 tons on their present output if they were asked to do so. In other words they have not got the raw material."

It is possible that fresh information has reached you since you gave evidence before the Fiscal Commission. Have you found reason to modify the opinion you gave, or do you adhere to it in substance?

*Mr. Pearson.*—I will modify it in so far that I did not then realise that the manufacturers would come as far as the Punjab hills for their grass.

That would give them another area from which they could obtain supplies. I never dreamt that they would come a thousand miles for their supplies, and I was not certain in what quantities supplies were available from the western area. Since then Mr. Raitt has gone into the question of the available supplies further west and he has found that there are considerable supplies. I maintain that what Mr. Raitt has said to be substantially correct.

*Mr. Ginwala.*—These people say that, since you expressed that opinion, they have changed the position by having other areas at their disposal and working the areas now themselves, that is to say, by working them departmentally, instead of working them through contractors. As a result they estimate that the quantity of grass produced will increase, the quality will improve and the cost will go down. I am not quoting their words, but that in substance is what they have expressed. What have you got to say about it?

*Mr. Pearson.*—Obviously a contractor would not clear the ground as clean as possibly a good manager might do, but I do not think that would generally affect the position of affairs. It might add a small percentage to the amount of grass that they could obtain, but the areas are known to be definitely marked where *sabai* exists, and I do not think that it would materially increase the outturn and affect the general position sufficiently to reduce the cost. They have not reduced costs in spite of the fact that they now work all the three areas, namely Sahelgunge, Nepal and the Sewaliks.

*Mr. Ginwala.*—Have you inspected these areas?

*Mr. Pearson.*—I have been through the Sewalik areas—the hills south of the Doon.

*Mr. Ginwala.*—What are these areas? They might call them by a different name.

*Mr. Pearson.*—These are the Saharanpur areas in the United Provinces, where they have a European manager to work the grass.

*President.*—They call it the western area.

*Mr. Pearson.*—They have been working it very intensively but the prices have not gone down.

*Mr. Ginwala.*—The Bengal Paper Mills, for instance, have got what they call the Nagpur areas in Chota Nagpur, but the Titaghur Mills have got three different areas—the Western circle or the United Provinces area, the Nepal area and the Sahelgunge area. They expect to get 11 lakhs of maunds out of these areas: four lakhs from the Western circle, three lakhs from Nepal and four lakhs from Sahelgunge. That is abundant for their purposes.

*Mr. Pearson.*—Their contention that the prices will go down is not justified at present.

*President.*—It is rather an expectation that they may bring down the cost.

*Mr. Ginwala.*—A large percentage of this cost is, as you know, royalty or rent. That of course they cannot bring down very much except by working at full capacity.

*Mr. Raitt.*—The reason for the royalty being so high is competition. In other words they have been scrambling for grass. That means that they have not got enough grass for them all.

*Mr. Pearson.*—*Sabai* grass is also used for other purposes up here.

*Mr. Ginwala.*—For instance, take the Titaghur Paper Mill. They give their cost of grass in one particular year as Rs. 31-4 per ton. That includes everything except royalty and transportation.

*Mr. Raitt.*—You mean the cost of collecting, supervision, baling and putting on rail?

*Mr. Ginwala.*—Yes, and the royalty which comes to Rs. 19 a ton. This is the average for all areas.

*Mr. Raitt.*—When I began work in Chota Nagpur, the areas where the Bengal Paper Mills were working were started by me and the royalty then

was two annas a maund which is Rs. 3-6 a ton and you say it is now Rs. 19.

*President.*—It works out in this way. It is in the Western areas that the royalty is very heavy. The Government royalty is an annual payment of Rs. 77,500 irrespective of the quantity of grass taken out, and they have also an annual *salami* of Rs. 1 lakh to the person (or persons) from whom they took over the concession. In the year of which Mr. Ginwala gave you the figures, the actual output was only a quarter of the full output. The royalty and *salami* together, therefore, amounted to about Rs. 60 a ton in that year, but it would be only Rs. 15 a ton if they obtained the full output. I quite admit of course that royalty at the rate of Rs. 15 a ton on grass which is a thousand miles away from the mill is a very serious proposition indeed.

*Mr. Perree.*—They claim somewhere I think that the Forest royalty is oppressive. It is not royalty but it is rent. The amount payable was offered in open competition.

*President.*—What the Titaghur Mills told us in evidence was that the Government royalty on their Western circle was Rs. 77,500. The Board understood from the oral evidence that this payment was of the nature of a rent and not a royalty. Are you in a position to tell us how the figure was probably fixed? What is the ordinary method?

*Mr. Perree.*—As a rule tenders are called for. The ordinary method of selling produce in this form is by tender.

*President.*—Therefore your belief is that the amount of the rent paid for this area would be determined by the offers received?

*Mr. Perree.*—Yes, presumably.

*Mr. Pearson.*—And the value of the grass in the market for all purposes.

*Mr. Ginwala.*—That is generally applicable to most forests?

*Mr. Perree.*—There was already competition for that grass before these people came here.

*Mr. Kale.*—Is *sabai* grass used for grazing purposes?

*Mr. Pearson.*—For thatching, basket-making, mat-making and for making ropes. There are other competitive uses for it besides paper making. I do not know whether in Sahebgunge there is a call on it for other purposes.

*Mr. Ginwala.*—I take it that the rent or royalty has reached a point at which *sabai* grass cannot be used for these other purposes?

*Mr. Pearson.*—Entirely. It may be mentioned in this connection that the Couper Paper Mills at Lucknow would be competitors for that grass as well.

*President.*—In any area where there is competition for the *sabai* grass, it is obvious that the rent or royalty may add very seriously to the cost. Apart from that, there is the distance at which Titaghur Mills are situated from this source of supply. How far would the opinion you have expressed be modified if a mill or mills were to be established nearer to the grass?

*Mr. Raitt.*—The position would be entirely different. What is the railway freight from here to Calcutta?

*President.*—The average railway freight I think is Rs. 13 a ton for all their grasses, but I do not remember the exact freight from these areas to Calcutta.

It seemed to me that in the passage quoted from your evidence before the Fiscal Commission you tacitly assumed that the mills would continue to be of their present sizes. If paper was to be manufactured at Titaghur and Ranigunge, it was your opinion that these mills could not expand their output because they would have to go too far afield for their grass. In that case your statement might be subject to some modification, assuming that there was sufficient market up-country to justify the establishment of mills in the vicinity of the grass.

*Mr. Pearson.*—It would at once be worth considering whether one mill could be started in what is known as the Western area, and in this connection

I know that the Titaghur Mills themselves went a long way into considering the possibility of erecting a mill at Saharanpur, or in the neighbourhood.

*President.*—That was to be a pulp mill, was it not?

*Mr. Pearson.*—Yes. It is therefore fairly certain that it was considered as a commercial proposition that such a pulp mill could be erected profitably away from the paper mill, the idea being to get pulp from the Western area to Calcutta to be transformed into paper.

*President.*—So that by the establishment of pulp mills up-country it might be possible to expand the available supply of grass in India?

*Mr. Pearson.*—I would modify that statement in this way: You say 'the establishment of pulp mills', I should say 'the establishment of one pulp mill'.

*President.*—I think that the manufacturers also told us that there was a considerable amount of *sabai* grass in the Central Provinces. Have you any information on that point?

*Mr. Pearson.*—I inspected an area in Hoshangabad, partly with a view to using bamboo combined with *sabai*. I could give you the yield from these areas, such as Betul, Nimar, Khandesh, Hoshangabad and Melghat from our records. I am not quite certain what quantity of *sabai* could be obtained but the amount available was extremely small. If I remember right, a mill could possibly be erected with an outturn of 15 to 18 hundred tons annually, with combined bamboo and *sabai*. Therefore the amount of *sabai* in each district might possibly amount to 1,000 tons in a favourable locality, in one district, but not more.

*Mr. Raitt.*—In other words it is not enough.

*President.*—You think that the Central Provinces grass should not count for very much?

*Mr. Pearson.*—No, even adding bamboo to help it out.

*President.*—If there is to be a very considerable expansion or development of paper manufacture in India, in your opinion we must for the present look chiefly to bamboo?

*Mr. Pearson.*—Yes.

*President.*—There is a possibility, I understand, that other grasses, Savanna grass for instance, might sooner or later come into use.

*Mr. Pearson.*—Yes.

*President.*—But their possibilities have not been so fully explored?

*Mr. Pearson.*—They did not appear to us as being so good and we have so far given our chief attention to the bamboo problems. We have just touched the fringe of the Elephant grass problems. We know that certain of them are suitable, and there are considerable quantities, but naturally both we and the manufacturers will go for what appears to be the most profitable and suitable and we have gone for bamboos.

*President.*—Supposing that bamboo becomes the most important material for the manufacture of paper in India, do you think that grass will go out altogether, or do you think that the available supply of *sabai* grass would continue to be used as a supplementary raw material?

*Mr. Raitt.*—Yes, I do, for the reason that grass is a very superior quality of raw material. It is better than bamboo and it is as good as anything in the world. The only thing that can compare with it is Esparto used by the English paper makers. That is as regards quality, but they are both very expensive and costly. Esparto has to be taken from the Northern shores of Africa to Scotland, and there is no possibility of pulping it in Africa. Both are expensive to the paper maker because they have to bring them from a long distance: I think *sabai*, even with the contraction of the areas, would still remain a considerable material.

*Mr. Pearson.*—It is unthinkable that *sabai* will be ousted.

*Mr. Ginwala.*—What about the possibility of rice straw which was mentioned by Sir Willoughby Carey as an additional source of supply?

*Mr. Raitt.*—I do not think it will be suitable for paper in India. In Europe a very good quality of paper can be made from oat straws and wheat straws, but there farming is carried on in a highly scientific fashion with the result that the paper maker gets it clean.

*Mr. Ginwala.*—We are not dealing now with the difficulty of collection.

*Mr. Raitt.*—I am dealing with the quality. For the reason that rice straw grown in the East under somewhat primitive methods of agriculture is extremely dirty and full of weeds, and owing to ineffective methods of winnowing, it contains a certain amount of rice and husks which play the mischief with paper, because they won't reduce to pulp and they remain in the paper as ugly looking specks. You cannot get the quality, but there is a possibility of utilising it for straw boards. It is the essential material for that. Paper made of it is possible but you cannot get the quality.

*Mr. Ginwala.*—What is the yield of that?

*Mr. Raitt.*—It is rather low. It is not more than 30 per cent.

*Mr. Ginwala.*—Does it bleach properly?

*Mr. Raitt.*—Yes.

*Mr. Ginwala.*—But it affects the quality of the paper?

*Mr. Raitt.*—Yes, there are dirt and foreign matters in it.

*Mr. Ginwala.*—It does not make as good paper as *sabai*?

*Mr. Raitt.*—No.

*Mr. Ginwala.*—What about wood pulp? Does it compare favourably with wood pulp?

*Mr. Raitt.*—Wood pulp is infinitely superior. Another thing which is against rice straw is that only in a few parts of the country you have a surplus of rice straw. In most districts in India domestic consumption for cattle fodder, thatching and all that pretty well uses it all up. I had a case a year or so ago with the Director of Industries, United Provinces, who was very keen on getting the straw board industry started in that Province. He had some people who were actively enquiring into it, and the matter was passed on to me. The first thing that I said was "Get me as accurate an estimate as you can as to the quantity of the surplus to the local demand that can be obtained in anyone given centre"—(of course there again, for such a bulky material, the railway freight comes in)—"and if you can find 15,000 tons annually within an economic radius of some given point as regards freight, then you would have materials sufficient to start a straw board mill." After going into the matter he had to say that he could not find it.

*Mr. Ginwala.*—You would not call the United Provinces a rice growing province?

*Mr. Raitt.*—No, but I am only giving you an instance.

*Mr. Ginwala.*—But it is the wrong Province.

*Mr. Raitt.*—Yes it is. Rice straw has always been available to the paper maker in India but he has never touched it. During the war the Titaghur Paper Mills used some of it. They got paper made of straw, but at that time Government and everybody else would buy any paper they could get hold of.

*President.*—I will now ask you for any information you may have about the supplies of material available for the proposed paper mill in the Khandesh district, promoted by Messrs. Kamat and Sons.

*Mr. Pearson.*—I could possibly give you some definite information. I was Divisional Officer of the old West Khandesh Division for three years, and I know the area thoroughly. The conditions in Khandesh are distinctly good. The Khandesh Satpurus run east and west at a distance of 12 miles from the factory side. The Bombay-Agra road cuts the area at right angles running North and South. The area is quite easily exploitable. It is situated on the foot-hills of the higher range, and labour is available in very fair quantity, in the shape of Bhil labour, who are used to collecting and cutting

grass. The quantity of grass available is certainly very considerable and as proof. I exploited grass myself in 1909 in the southern area. The grass was extracted relatively easily and at a cheap rate. There is an abundant supply of water because the proposed mill site is on the Tapti river; the railway station, Nardana, is close by with an exit towards Surat and an exit towards Bombay. Moreover, the surrounding areas contain a large population in a rich cotton country and therefore the demand for paper should be very considerable. So far as the above conditions are concerned they are all favourable to the establishment of a pulp mill. The grass is fairly abundant but is mixed with several species, so that there is no possibility of getting any one kind of grass. You would have to take the grass as it came to hand, and that resolves itself into the question whether such mixed grass is suitable for paper making. The position is that Mr. Kamat came up here and showed me a sample made by Mr. Sindall. The report was favourable. The samples were made in a small digester, on which you cannot form a very reliable opinion; we therefore proposed to the firm to send up several tons of grass as it came to hand, in other words as it would normally be collected, to enable us to find out what quality of paper it would really yield when pulped on a large semi-commercial scale. That is the position of the Kamat scheme as it now stands, as far as I know, though other developments may have taken place since the enquiry was made.

*President.*—What it comes to is this that, if it can be established by experiment on a sufficient scale that the raw material was suitable, then you would regard it as a good proposition?

*Mr. Raitt.*—As a fair to moderate proposition.

*President.*—But you have had no opportunity to test the suitability of the raw material in the Research Institute?

*Mr. Raitt.*—No.

*Mr. Kale.*—You said there was a mixture of grass; what are the kinds of grasses: is there any *sabai*?

*Mr. Pearson.*—I cannot tell you what the species are. There are several. There is no *sabai*.

*Mr. Ginwala.*—Let us now turn to the Punjab Company. That is a grass proposition, is it not?

*Mr. Pearson.*—Yes, *sabai*.

*Mr. Ginwala.*—They will probably tap the same field.

*Mr. Raitt.*—No. They are tapping the areas due west from here comprising Sirmoor and certain other hill States.

*Mr. Ginwala.*—Will they come eventually into competition with, say the areas worked by the Couper Paper Mills and the Titaghur Paper Mills?

*Mr. Raitt.*—No. Mr. Kashi Ram has been wise enough to secure a monopoly there. He has brought three States into the scheme in a sort of partnership in such a way that he capitalises the value of the royalty, which is taken at a very low figure, by an agreement into so many shares in the Company. They will get the royalty in the shape of dividends on their shares if there is any. There will be no competition so far as the Punjab Mill is concerned.

*Mr. Ginwala.*—What I want to know is the kind of grass which you consider has been successful on actual tests.

*Mr. Raitt.*—Are you speaking of *sabai*?

*Mr. Ginwala.*—Any grass that you like, whatever grass with which you have had actual tests.

*Mr. Raitt.*—Of the *sabai* type none other than *sabai* has yet been tested on a quasi-commercial scale. Then we come to Savanna grass. We can mention 6 types which have been tested in the Titaghur Paper Mills, namely the *nal*, *ekra*, *khagra*, *moonj*, *bhatta* and *ula*. We have not touched them yet here.



Mr. Ginwala.—How do they compare with, say, *sabai* grass with reference to yield?

Mr. Raitt.—About 2 or 3 per cent. less.

Mr. Ginwala.—With regard to bleaching qualities how do they compare?

Mr. Raitt.—Quite satisfactorily.

Mr. Ginwala.—And as to the nature of the fibre?

Mr. Raitt.—Not so good as *sabai*, nor so good as bamboo, with the exception of *ula* that we found to be rather a superior one.

Mr. Ginwala.—Can you give us any idea of the quantities available?

Mr. Pearson.—I spent two touring seasons in Assam, with a view to inspecting the elephant grass areas. The conditions, since I inspected these areas have changed, for the reason that a large emigration has taken place from the southern portion of Bengal, viz., Mymensingh, of graziers who have virtually ruined these grasses. Mahomedans have also settled in the northern banks of the Bramhaputra where they have used much of this grass. Except in such local areas where the Bramhaputra floods the banks so heavily and for so long that it is not worth their while dealing with them, the grass is virtually untouched. The grass areas are large nevertheless. How far they have receded from the banks I do not know, but the actual yield is very considerable in certain localities. It would require a re-survey. I think I made mine six years ago, but it would require looking into as I have no doubt there are areas which can be selected conveniently situated as to the railway and river.

Mr. Ginwala.—Was not there an estimate giving 3 million tons as the total available?

Mr. Pearson.—I would not like to risk a figure of yield at all.

Mr. Raitt.—That was a figure given by me. It was not the result of actual survey.

Mr. Pearson.—The actual survey of one plot that I can remember was at Dighatali on the Monas River and I got 27 tons of green grass in one acre, which dried down to about 11 tons. It was a very high yield indeed. That was probably an exceptional area. I inspected and re-cut the area next year with a view to ascertaining the effect of cropping, and the yield was much reduced.

Mr. Ginwala.—Just as in the case of bamboo you have given us five or six areas, have you got areas like that in respect of these different grasses?

Mr. Pearson.—I have figures which have been published; but as they are, they are untrustworthy now, and we have no time here now to do that kind of work.

Mr. Ginwala.—May I take it that so far as we are concerned in the matter of availability of grass as a raw material on a commercial scale, it would be safe for us to exclude everything except *sabai*?

Mr. Pearson.—I think it would be right to do so.

Mr. Perree.—There is one difficulty about elephant grass. You have a large stretch of country, 200 or 300 square miles of high lands, occupied by scattered grass. The people graze their cattle and burn it every year, and it takes 3 years to reach maturity. If in the interval the crop is ruined, you would then have to select the immature crop, which is not three-year old. Then you know there are administrative difficulties in going into waste lands and taking that. The villagers have a right to the grass. How on earth can you give a monopoly; that is the point.

Mr. Ginwala.—That is just the thing. You cannot exclude the human element from the use of the raw material. That simply means that it is not available for purposes other than for use by the villagers.

Mr. Perree.—That is so. You have large stretches of country where the population is daily increasing. I have been in that part of the country and I have tried my utmost to push the starting of paper manufacture there.

During the interval of the last ten years the conditions have so changed that it is no longer possible to find any area which will satisfy all their requirements. As regards Assam, although I believe somebody has got a monopoly for the time being of priority of all grass areas from Dibrugarh right down to Dhubri, there is no area which you can pitch on which will satisfy all requirements.

*Mr. Ginwala.*—The point is that you cannot displace the population merely to obtain raw materials?

*Mr. Perree.*—No.

*Mr. Ginwala.*—If that principle is applied then much of the grass is not available, isn't it?

*Mr. Perree.*—Yes, that is right. I should not go so far as to say that elephant grass in that tract is no longer worth trying, but I should certainly not advise anyone to float a company.

*Mr. Pearson.*—We may say that as far as Assam is concerned in a short time if emigration were to expand as it is now expanding, to work out a scheme for a pulp mill would not be worth trying. I would like to say that if in the Central Provinces and in Khandesh we find the grass to be suitable, as the conditions there do not yet indicate that the grass is being utilized for local purposes, or will be in the near future, then any schemes for pulp mills will be worth considering. In other areas the grazing question is acute, e.g., in Poona and Sholapur, but in Khandesh and parts of the Central Provinces there are certainly large areas where nobody except the Bhil goes, and which are worthy of further consideration in this connection.

*Mr. Ginwala.*—With regard to the mixture of grass has any experiment actually been made?

*Mr. Raitt.*—No, we avoid that.

*Mr. Ginwala.*—As a pulp expert is it your opinion that grasses cannot be mixed?

*Mr. Raitt.*—One answer does not apply to them all. We are paying attention to the question to what extent mixture could be allowed. Some will mix and cause no trouble, others will not.

*Mr. Ginwala.*—As regards the 7 classes of grass we have taken can you mix these?

*Mr. Raitt.*—You cannot mix anything with *sabai*.

*Mr. Ginwala.*—Leaving out *sabai*?

*Mr. Raitt.*—It would not be safe to answer that.

*Mr. Ginwala.*—With regard to Mr. Kamat's grasses?

*Mr. Raitt.*—The same answer applies.

*Mr. Pearson.*—If they will send us an adequate quantity of grass we will give them an answer.

*Mr. Ginwala.*—Have you obtained any successful result by the mixture of grass?

*Mr. Raitt.*—Yes. It is entirely in the big Savanna grasses.

*Mr. Ginwala.*—But these are merely laboratory tests, so that they do not help us. So far as your knowledge goes at present, you think it is not safe to consider a mixture, don't you?

*Mr. Raitt.*—Yes.

*Mr. Ginwala.*—So that, if anyone wants to manufacture, he has either to separate the grass in the field or in the mill itself? Is that what it comes to?

*Mr. Pearson.*—I could not agree to that myself. I would simply say that your question is going ahead of our enquiries.

*Mr. Raitt.*—We can always say that we know that in some cases it can be done in Savanna grass.

*Mr. Perree.*—I may tell you that the Savanna grass occurs separately more or less according to the level of the ground, and therefore there is no question of difficulty in sorting this out.

*Mr. Pearson.*—The grasses grow so mixed that you could not possibly sort them out. The *ula* grass, which is a high grass, generally grows in low depressions and is nearly or virtually pure.

*Mr. Ginwala.*—Of those that you have mentioned *moonj* is one out of which paper has been manufactured on a commercial scale?

*Mr. Raitt.*—Yes, and very good paper too.

*Mr. Pearson.*—The value of *moonj* for other purposes is greater probably than any other grass mentioned this morning.

*Mr. Ginwala.*—Therefore it is not commercially available for the manufacture of paper?

*Mr. Raitt.*—That is right.

*Mr. Ginwala.*—That also must therefore be laid aside as a source of supply?

*Mr. Raitt.*—That is right.

*Mr. Kale.*—Are there large quantities of this *moonj* grass available and if they are, where are they?

*Mr. Pearson.*—Large quantities are available, for instance, in the United Provinces which is a well known *moonj* area.

It is very largely cropped and exported to Meerut, Delhi and further south for making boxes, matting, etc.

*Mr. Kale.*—Is not *moonj* grass grown in any other Province?

*Mr. Raitt.*—Yes, it grows in Bengal. But the point about *moonj* is this: wherever it is found the local demand for such purposes as have been mentioned is too great to allow the paper maker to come in for a small surplus. The paper manufacturer knows perfectly well that this is an excellent grass. But only in rare cases will it be available for paper makers. So you may rule it out.

*President.*—Coming on to bamboo, I would like to ask one or two questions as to how it compares with *sabai* grass,—to begin with how does it compare in yield?

*Mr. Raitt.*—The yield is more.

*President.*—It is a little more?

*Mr. Raitt.*—Yes. Taking it down to its ultimate figure, the yield of *sabai* is about 33 per cent. in paper and that from bamboo is about 39.

*President.*—When we were examining Sir Willoughby Carey we got into some confusion about this question of the yield. I have never been quite sure that I thoroughly understood his meaning. When you say that the yield of *sabai* grass is 33 per cent., does that mean that, when you make a ton of paper entirely out of *sabai* grass, you use 3 tons of *sabai* grass?

*Mr. Raitt.*—Yes.

*President.*—And in addition you add certain chemicals?

*Mr. Raitt.*—Do you mean something that would add to the weight?

*President.*—Yes.

*Mr. Raitt.*—That would be China clay. That is all excluded from the calculations.

*President.*—If no account is taken of the China clay or anything else that adds to the weight of the finished paper, the proportion is 33 per cent.

*Mr. Raitt.*—Yes.

*President.*—If I do take that into account, then what is the proportion? It will vary I suppose with the extra stuff added.

*Mr. Raitt.*—It varies very much, and the variation with other materials would be just the same.

*President.*—What would be the yield of unbleached pulp per ton of *sabai*?

*Mr. Raitt.*—You get 40 per cent. of unbleached pulp which is further reduced to 33 in bleaching.

*President.*—Then what would be the yield of unbleached pulp per ton of bamboo?

*Mr. Raitt.*—You would get 43 per cent. which is reduced to 39 per cent. in bleaching.

*President.*—As a paper making material, how do they compare, *sabai* grass and bamboo, as regards the quality of the fibre?

*Mr. Raitt.*—*Sabai* is a superior fibre.

*President.*—Therefore it would have an advantage especially for the better classes of paper?

*Mr. Raitt.*—That is so, but you cannot look at that point of view unless you remember what the proportions are of consumption in the paper market. You may take it that 70 per cent. of all the paper that is used is of a quality for which bamboo is perfectly good.

*President.*—That is to say, it is good enough and the extra quality of *sabai* does not count?

*Mr. Raitt.*—It is not necessary in that class of paper.

*President.*—How do they compare as regards the tonnage yield per acre?

*Mr. Raitt.*—Very much in favour of bamboo.

*President.*—Then the manufacturer should be able to get his supplies of bamboo from a smaller area without going so far afield?

*Mr. Raitt.*—Yes.

*President.*—The figure which the Titaghur Company gave us as the cost of collecting their grass from one particular area came to something considerable. I mean the expenses incurred up to the point where the grass reached the railway.

*Mr. Raitt.*—On one side you have a material probably exclusively occupying the whole block or area in dense clumps close together, while with the other material, if you go into the forests, you get one clump here and one clump there and so on, and the weight of each clump is trifling, whereas the weight of every cutting of bamboos is very considerable.

*President.*—Would it be correct to say that, where water transport is available, the cost of transporting bamboo to the nearest site where a pulp mill might be erected would be lower than the cost of transporting *sabai* grass?

*Mr. Raitt.*—Very much less.

*President.*—But that would be dependent on the existence of water transport?

*Mr. Raitt.*—Yes.

*President.*—Are there any other circumstances in respect of which it would be useful to compare bamboo and *sabai* grass to show the relative advantage or disadvantage of one over the other?

*Mr. Raitt.*—No. When you have touched the transport question, you have touched everything.

*Mr. Pearson.*—For one thing you can burn *sabai* grass extremely easily but you cannot burn bamboo. You might ruin it, and they do ruin the *sabai* crop.

*President.*—Bamboo is not so liable to accidental damage?

*Mr. Pearson.*—No.

*President.*—May I interject one question? It relates to some evidence we had from the Paper companies. They said that they would be able to make fuller use of the available supply of grass if they were allowed to go on cutting later than April. Can you tell us the reason why the Forest Department do not allow people to cut the grass beyond April?

*Mr. Pearson.*—Because of the fear of fire.

*President.*—Fires starting then might be very dangerous to the forest as a whole?

*Mr. Pearson.*—Yes, as well as to the grass. There is one point which is not quite clear and that is in cropping *sabai* your general lead to the railway would be less than your general lead in the case of bamboo. But still bamboo has the advantage. It can be carried by water transport. Distance does not count for much. If it is even 200 miles, it does not affect it. But in the case of grass if it is two miles more, you often have to leave it. Grass freight tells against it heavily. You can float the bamboo but you have to cart the grass.

*President.*—Let us take as a typical case the Chittagong area where Messrs. Andrew Yule & Co. are working. Would the distance from the place where they cut the bamboo to the bank of the river be greater than the distance from which you would have to cart the *sabai* to the railway?

*Mr. Pearson.*—It would be inverse. In that case, the bamboos are absolutely on the banks of the river. The limit which I took in estimating the area when their representative went up with me was only half a mile from the river. Though there are 20 or 30 miles of dense bamboo forest on each side of the river, it was not necessary to go more than a few hundred yards from the river. They have 120 miles of frontage along the river from which to extract bamboos. All that they have to do is to cut the bamboo and float it in the river. It is only a question of organising labour.

*Mr. Raitt.*—As between bamboo and *sabai* grass, the advantage lies with bamboo. In the case of grass, the cost goes up because it is taken out as cooly head-loads to the haling or carting point.

*President.*—Up to a point where you have something like a road where you put it on to the cart?

*Mr. Raitt.*—Yes.

*Mr. Pearson.*—Each individual culm is tied with a rope and several of these are bundled together to make one unit of a raft.

*President.*—That expenditure has got to be taken into account as being against bamboo.

Arising out of the question I have just been asking: what do you consider are the most important features that ought to be present to make the bamboo commercially exploitable for paper manufacture?

*Mr. Raitt.*—Water transport from the forest to the factory—I am dealing with forests so distant that they must be exploited by a factory on the spot—and sea transport for pulp from the factory. I am excluding cases like Cuttack and even Chittagong where there is a comparatively small difference between costs of transporting. Dealing with the proposition where a pulp mill is absolutely necessary on the spot, you should have a large quantity of bamboo available, water transport and forest labour. These are the three chief items.

*Mr. Pearson.*—Local vested interests should not interfere.

*President.*—There appears to be a clash between the last two conditions. It is very desirable that you should have an ample supply of labour; on the other hand there must be as little as possible of vested interests in bamboo. It may be the labour supply that possesses vested interests.

*Mr. Raitt.*—It is usually the case with the bamboo areas that have been investigated—in fact all of them. It is one of the points that we always have before us when we go to investigate an area. If these vested interests and others interfere seriously, we rule it out. It is no use going there. The point of that is that there are sufficient bamboo areas in the country which are free from these conditions to establish a very substantial industry. There are so many of them known to be free from vested interests that it is no use bothering about those which are not. The question is more vital where you have an extremely sparse population in the forest and you have to import labour for the forest working season. That will occur, in fact it occurs so often that we regard it as a natural difficulty in every case.

*Mr. Kale.*—Do you think that if fairer opportunities are given, Indians will take to industrial occupations in increased numbers?

*Mr. Bhargava.*—I think so.

*Mr. Kale.*—Is it a fact that in selecting students to learn paper-making in Europe the right kind of material is not always available? That is to say, that any one who offers to go to a foreign country to learn paper manufacture, etc., is given a scholarship without taking into consideration whether he has aptitude for this and other things.

*Mr. Bhargava.*—Yes.

*Mr. Kale.*—Do you think that this state of things is improving and that Local Governments, for instance, in giving scholarships now take into consideration whether the man has put in some work in an Indian factory or not?

*Mr. Bhargava.*—Of course they have made this one of the conditions for technical scholarships that they should have spent some time in a factory or should spend some time there after their return, but still I cannot say that the right sort of men come.

*Mr. Kale.*—But you think that the condition is useful? If a man has put in six months or one year in a factory here, he is quite competent more easily to pick up his training in a foreign country?

*Mr. Bhargava.*—It must be seen whether the time he has spent in a factory has shown that he is really capable of getting his training. It is important but I consider it is not enough simply laying down a condition and not strictly observing it.

*Mr. Kale.*—What do you think should be done?

*Mr. Bhargava.*—It is a rather difficult question to answer just now.

*Mr. Raitt.*—I think Mr. Bhargava is trying to express the desirability of some sort of active expert supervision of such men working in this country in order to see whether they are behaving properly and doing their work and making real progress or simply wasting their time. At present there is nothing of that sort. I think they should be given an opportunity in this country to work in a factory.

*Mr. Bhargava.*—I think no one should be allowed to go out until he has spent two or three years here in a factory.

*Mr. Kale.*—How can you compel the Bengal Paper Mills, for instance, to take an Indian in order that he may learn paper manufacture here for two or three years?

*Mr. Bhargava.*—You cannot compel them, but it is a moral obligation. For instance, if Government want to send someone to England to study the industry, they might ask the Bengal Paper Mills to take him up.

*Mr. Kale.*—But why should they take him up? What hold has Government on the mill?

*Mr. Bhargava.*—Government as buyers of paper may have some influence with the mills.

*Mr. Kale.*—Otherwise there is no chance for Indians to get any training before they go to foreign countries? To-day there is no such provision. It was a lucky coincidence that you got into the Lucknow works?

*Mr. Bhargava.*—In the Lucknow Works it was different, because the Directors knew me. There were two other scholars who were sent to Europe, one from the Punjab and the other from Bengal. The scholar from the Punjab was sent to the Bengal Paper Mills by Government, and there was no objection to taking him.

*Mr. Kale.*—What I was thinking of is this: that some sort of provision should be made by Government to secure fairer opportunities for Indians to get a preliminary training in this country before they are sent out to foreign countries.

*Mr. Bhargava.*—Yes.

*President.*—Does that apply to grass areas also?

*Mr. Raitt.*—Still more so.

*President.*—As regards the amount of labour involved, or the number of workmen required to collect a given quantity of bamboo or a given quantity of grass, which has the advantage?

*Mr. Raitt.*—Fewer for bamboo because you have greater weights to handle close together.

*Mr. Pearson.*—I would not say what the percentage of costs is.

*Mr. Raitt.*—We have never worked it per head. We have worked it out to so many annas per ton of bamboo.

*President.*—That would depend upon the local rate of wages?

*Mr. Raitt.*—Yes. In Burma, it is quite a common proposition that all forest labour is imported for the season. It gets its supply largely from Cuttack and Orissa.

*Mr. Ginwala.*—I don't think that it applies to a thing like bamboo.

*Mr. Pearson.*—Not in Arakan, but in Burma.

*Mr. Ginwala.*—You can get forest labour especially for cutting bamboos and things like that?

*Mr. Pearson.*—There is no doubt that they can cut, and are cutting, bamboos.

*President.*—In what respect do you consider that bamboo as a paper making material has an advantage, immediate or prospective, as compared with wood?

*Mr. Raitt.*—The great advantage that stares you in the face to begin with is its original prime cost delivered at a suitable manufacturing site.

*President.*—I don't want to go into the question of cost at this point.

*Mr. Raitt.*—Well, take it this way. The wood from which pulp is made is almost exclusively spruce and fir. When wood pulp was invented about 50 years ago, both these woods in Scandinavia existed in enormous forests very often situated on tidal water for which there was no demand whatever. They were dead property and of no value, and so wood pulping went on by leaps and bounds, but the demand for wood pulping is one of the items which very promptly altered the situation. The easily accessible areas got rapidly cut out, and then there came in the extraordinary advance in the world's demand for wood as timber.

*President.*—To what do you ascribe the increase in the world's demand for timber as such, say in the last 20 years?

*Mr. Pearson.*—It is due to the higher standard of living demanding a better class of houses and general industrial development.

*President.*—Perhaps I might put it this way. The available supply of timber for both purposes is limited. The competition for the available supply is becoming more and more intense, and the saw mills can afford to pay more than the paper mills?

*Mr. Raitt.*—That is right.

*President.*—I notice that in the United States of America the importation of wood pulp seems to be going up heavily, apparently owing to the reduction in the amount of local wood that can be used?

*Mr. Raitt.*—Yes, they are now importing most of their wood supplies for their pulp mills from Canada.

*President.*—To get back to the comparison between wood and bamboo, you have not mentioned perhaps the most vital thing of all as regards the advantage to bamboo.

*Mr. Raitt.*—In the cost of the raw material?

*President.*—No, I am not thinking of that. I am thinking of something it underlies it. You have stated it yourself in some of your publications.

*Mr. Raitt.*—Wood cannot be replaced in anything less than 40 to 60 years.

*Mr. Ginwala.*—I have seen in one of the journals that in 16 years they could grow the kinds of trees which are required for pulping.

*Mr. Raitt.*—No, it is not possible.

*Mr. Ginwala.*—It is stated that, for pulping purposes, to renew the wood it would only take 16 years.

*Mr. Perree.*—It must be in an exceptionally favourable locality. Nowhere in the Northern or Southern regions could you do that.

*President.*—The initial point is this that bamboo replaces itself much more rapidly than wood?

*Mr. Raitt.*—Yes.

*President.*—Now how often can you crop the bamboo?

*Mr. Pearson.*—Roughly speaking once in three years. It of course depends on the species.

*President.*—Is that a fair average figure to take?

*Mr. Pearson.*—In the case of the single stem species that is not growing in clumps, it would take longer.

*President.*—What figure would you give, from what you know on the subject, as regards the period within which timber suitable for pulp manufacture can be replanted and reach sufficient maturity to be used?

*Mr. Raitt.*—To reach pulping size, it would take not less than 40 years and in some cases even 60 years.

*Mr. Ginwala.*—My only authority is a journal. There it is mentioned that in sixteen years you can make it grow.

*Mr. Pearson.*—As a Forest Officer I can say that in 16 years the initial cost of planting would not be covered. 30 years is the minimum and in some cases it goes to 60 years.

*President.*—The long period is due to a large extent to the fact that spruce and fir, which grow in the higher altitudes in northern countries, grow only for a comparatively short period during the year.

*Mr. Raitt.*—That is right.

*President.*—What is the tree which is found most suitable for pulp in a tropical country where it would reproduce itself much more rapidly?

*Mr. Pearson.*—No tree, as far as I can think of in India—of broad leaf species—has proved of any value for pulp. We have tried many samples. Not one has been found to be suitable.

*Mr. Ginwala.*—I don't say that any tree would grow. I am only referring to spruce and fir for pulp making.

*President.*—The stage at which bamboo would begin to replace wood as a material for paper manufacture is simply a question of pounds, shillings and pence, I suppose?

*Mr. Raitt.*—Yes.

*President.*—There is too little practical experience as yet, I suppose, to make it possible to give definite figures in pounds, shillings and pence for bamboos as a broad proposition?

*Mr. Raitt.*—That is right.

*President.*—There must be more practical experience of actual commercial working before that can be fully ascertained?

*Mr. Raitt.*—I quite agree.

*President.*—Equally again though it may be possible to forecast the rate at which the market price of wood pulp will rise, that forecast may be falsified?

*Mr. Raitt.*—Yes.

*President.*—For that reason I do not ask you to attempt to a detailed comparison of the cost of pulp and paper made from bamboos with the cost of pulp and paper made from wood. But I understand it is definitely your



opinion that, in course of time, the cost of wood for making paper must steadily go up?

*Mr. Pearson.*—Past history has certainly shown that to be so.

*President.*—And also you think that you have sufficient data to enable you to hold the opinion that with any great rise in the price of wood, the bamboo would become a serious rival?

*Mr. Pearson.*—I have held that opinion for the last 8 or 10 years.

*Mr. Raitt.*—It is an opinion which is very generally held by the leading paper makers in England itself. They all agree that the next thing they have got to look to is bamboo. That is the only possible substitute or alternative to wood. They are all satisfied on that.

*Mr. Pearson.*—They are also making all sorts of enquiries in all tropical countries outside England. They are very much now sitting on the stile to see what our little plant is going to do here. They are constantly enquiring about the progress. Mr. Sundgren tells me it is beginning to excite some interest even in Sweden, the home of wood pulp.

*President.*—The lowest figure we have had quoted for the price of wood pulp by the Titaghur Mills was about £12 f.o.b. London and £14 c.i.f. Calcutta. Do you regard that price as, for the present time, a normal price?

*Mr. Raitt.*—It is very low.

*Mr. Pearson.*—They quoted me that price nearly a year ago for a small quantity.

*Mr. Raitt.*—It is certainly higher than that now, and the wood pulp industry has been so tremendously hit by the slump after the war that the present condition of the wood pulp factories in Sweden and Norway is an extremely bad one financially.

*President.*—Can you refer the Board to any published papers on the subject?

*Mr. Sundgren.*—The figures published by the Swedish and Finnish Commercial Associations show that none of the mills are working at a real profit. Pulp mills generally are not making money now. That is sufficient indication that the present price is not the normal price.

*President.*—That of course depends on the general recovery of the trade from the present conditions.

*Mr. Sundgren.*—Quite a number of Canadian mills are shut down because they cannot compete with the price from Scandinavia.

*President.*—I think on this point we may ask Mr. Raitt and Mr. Pearson to tell us in which areas in India they consider exploitation of bamboo as a paper making material can best be attempted in the near future.

*Mr. Raitt.*—We can only deal with the areas we have seen. You can take the Arakan division: we both inspected that area.

*President.*—What are the advantages that exist there?

*Mr. Raitt.*—Excellent water transport chiefly, and comparatively near to Calcutta for supplies of coal.

*Mr. Pearson.*—There are enormous quantities of bamboos right down to the river edge. I went up 120 miles from the port to see whether there was suitable rafting water and the whole way there were dense blocks of solid bamboo on each side so far as you can see to the horizon. It was an extraordinary sight as there were 16,000 sq. miles of a complete block of bamboos and no trees at all. You can see this from the top of the hills. I went up the Seik River with the Divisional Officer and we then marched at right angles to the river and if you get on to a rather high ridge, with your field glass you can see up to the horizon a green crop of bamboo. In our map we have marked it down as somewhere in the neighbourhood of 16,000 sq. miles and there were magnificent floating streams down which to float.

*Mr. Raitt.*—You may take it that in the Arakan area there is room for several mills.

*President.*—What are the possibilities as regards the establishment of pulp mills at Akyab or its neighbourhood? Are there any practical difficulties as regards the establishment of pulp mills there?

*Mr. Raitt.*—No.

*President.*—I thought there was some doubt as to the quantity of fresh water available.

*Mr. Raitt.*—No. It all depends on distance above Akyab of the factory site.

*President.*—Can you get suitable sites so far as water is concerned within about 14 miles of Akyab?

*Mr. Raitt.*—Say 20 miles to make sure.

*President.*—Would you get people to go and live there?

*Mr. Raitt.*—It is a very important point I know. There is always that difficulty—health conditions.

*Mr. Pearson.*—I think the river is tidal for 80 miles and I am not in a position to say what percentage of fresh water can be got in the river roughly at any one point, but I should put it at 40 miles.

*Mr. Raitt.*—15 miles above Akyab there was fresh water at high tide. Water was sampled at various stages of the tide and given to the analyst.

*Mr. Ginwala.*—At high tide above 15 miles?

*Mr. Raitt.*—Not on the main river but there was a creek there.

*Mr. Ginwala.*—But the creek also was tidal?

*Mr. Raitt.*—This creek was coming from a shorter range than the main river, and it was coming down faster than the main river and therefore the tide had less effect upon it.

*Mr. Ginwala.*—We have made experiments for Rangoon water supply, and at 40 miles the water was still brackish.

*Mr. Pearson.*—The actual position of the mill, whether it is 20 miles or further up, can be settled by an analysis of the water. But the main fact remains that you can put several mills in that area.

*Mr. Ginwala.*—Can you go 30 miles?

*Mr. Raitt.*—I do not think you need go so far. The fresh water depends on the width of the river. In a narrow river you get more damming effect. In the case of the Tavoy proposition we did not get fresh water there until we went 50 miles from the mouth of the river, but you may take it that the point may be accurately established by sampling the water.

*President.*—All that we want to do is to explore in a very general way the areas which you consider possible.

*Mr. Raitt.*—As regards Arakan we are both agreed fully.

*Mr. Perree.*—Are you going to consider in this connection the supply of labour?

*President.*—That is an important factor too. What about the supply of labour in Arakan?

*Mr. Pearson.*—The supply of labour is good. During the tour I made, I found small villages all the way scattered through these bamboo areas with a small patch of cultivation and the inhabitants living a good deal on cutting down bamboo in the neighbourhood of their village, burning them and then sowing their crops. The people are used to cutting bamboos and there were plenty of them to cut and they lived on the spot. They have no call on the bamboo except that just in the vicinity of their houses and for further supplies they have only to go a short distance further on a few yards off. The Divisional Officer, Mr. Walter, who is a man of considerable experience, and myself came to the conclusion that the labour in Arakan was suitable.

*President.*—What is the next area?

*Mr. Pearson.*—The next one is the Tavoy area in South Burma. There you would have to import labour for the season. In other respects it is similar to the Arakan division.

*President.*—That is to say, there is abundance of bamboo within easy reach of the water?

*Mr. Raitt.*—Yes.

*President.*—Then you have told us that you have to go 50 miles for fresh water.

*Mr. Raitt.*—Tavoy town is 40 miles up the river.

*President.*—Supposing your mill was 10 miles above Tavoy, you would have to send 50 miles down the river?

*Mr. Raitt.*—It is a tidal river: you can go up and down.

*President.*—There you have to import labour?

*Mr. Raitt.*—Yes. Forest labour for the season.

*President.*—You would have to make some sort of arrangement for the housing?

*Mr. Raitt.*—As is done universally throughout Burma in many places.

*President.*—What other areas in addition do you think it worth while to mention?

*Mr. Pearson.*—The position is that, in Burma, there are several other areas which, if the pulp industry should become intensive, would doubtless become suitable, but for the present we have only selected the very cream of the areas available, and I cannot help thinking that the Pegu areas, which were turned down for various reasons, was not turned down for *bona fide* reasons. The general impression of the Burma civilian did not in any way tally with the final decision which was given about the exclusion of certain areas.

*Mr. Ginwala.*—What year was this?

*Mr. Pearson.*—About three years ago—1919-20. Pegu is a magnificent area for bamboo, a large portion of which is not touched.

*President.*—This is the area which the Titaghur people selected?

*Mr. Pearson.*—Yes. They have abandoned their mill on the alteration of the concession wording.

*President.*—Was it due to difficulties about what we may call vested interests?

*Mr. Pearson.*—I understood not so much with the *ryot* people: they were fully satisfied with these—but with small traders. Possibly other considerations were brought in.

*President.*—Where is this Pegu area? Can you tell us in a general way how it is situated?

*Mr. Pearson.*—It is situated on the river Pegu. The Pegu river takes off about 15 miles above Pegu town and turns north-west into the Yomas and runs up to the top of the hills. Half way down in the forest there is a very bad cataract above which it is not possible to extract bamboos. Neither will timber pass that point. Below that there is a large area in the reserved forest and portions in unclassified forest which can supply sufficient bamboo which, at the very lowest yield, would give 10,000 tons of pulp a year. At the same time that area is capable of also meeting all the local demands which include very largely the supply to Rangoon.

*President.*—If a suitable site for a factory exists, would that be near Rangoon or higher up?

*Mr. Pearson.*—It would be above Rangoon unless sites are available on the other side of the port, i.e., Burma Oil Company site. The Syrian site, I understand, is not valuable as you will have to go higher up for water.

*President.*—It may be necessary in order to get a suitable site to go a considerable distance up the Pegu river in order to get fresh water?

*Mr. Pearson.*—Yes.

*President.*—How about labour supply in this area?

*Mr. Pearson.*—Labour supply is not so good as it would be in Arakan, but it is considered, on careful enquiry, to be sufficient without imported labour. It could be supplied from the Insein district. It is not required to import large quantities of labour from outside. On the other hand, it is not so good and so well distributed as in Arakan.

*President.*—Are there any other areas?

*Mr. Pearson.*—I think we have exhausted Burma. We now come to Cuttack.

*President.*—A general account of that is contained in your report and I don't think we need ask you to supplement that.

*Mr. Pearson.*—As regards the position in the West Coast, I would not like to say anything until it is re-surveyed. We know there are likely areas which are suitable and it would repay a re-survey. Beyond that we would not go. The three areas which are fairly obvious are the Kalanadi and Gangavalli in the Bombay Presidency and Nilambur in Madras, but they would require a re-survey before I can commit myself to anything. The difficulty there will be labour. They are engaged in extracting teak and the introduction of another industry would absorb a large quantity of the scantily available labour.

*Mr. Raitt.*—The next thing is the Tinnevely area, which is still under survey. I have seen it once and propose to do so again. It looks very good and that is all we can say.

*President.*—Is that to be worked by any firm?

*Mr. Raitt.*—No; the Madras Government are dealing with it. It is a big proposition. In the hills in the Tinnevely district, which were hitherto inaccessible owing to transport difficulties, there is valuable bamboo and grass. Higher and deeper into the hills there is valuable timber. Still higher on the slopes it contains the *Eta* bamboo, which we propose to use. The Madras Forest Engineer, Mr. Martin, is interested very deeply in these matters. His proposal has so far taken the form of forest industrial settlements at suitable sites on a plateau within reach of the railway, and there he is working out a scheme for certain forest industries, including saw mill, match factory, pulp mill, creosoting and so on. His idea has not taken form yet. His idea is that Government should have a large hydro-electric power, as this area has most valuable rivers with high falls for producing electricity, and his scheme is being worked out on the basis of Government developing this power, and selling it to individual industries which would be started by private people, and possibly using it also in irrigation schemes.

*President.*—That is not one of the schemes that you and Mr. Pearson have investigated closely, and I think we need not go very deeply into it.

Are these that you have mentioned the propositions which you regard as the cream of the possibilities of bamboo in India? Supposing the manufacture of paper from bamboo became firmly established and that the cost of wood pulp rose to a point at which bamboo could seriously compete, would you then expect to see the manufacture of pulp extend to areas other than those you have mentioned?

*Mr. Raitt.*—Yes.

*President.*—And it is difficult, I suppose, to limit the possibilities in that direction?

*Mr. Raitt.*—Quite so, until a re-survey has been carried out.

*Mr. Kale.*—What about the Surat project?

*Mr. Pearson.*—The Surat problem is in a way quite attractive. It consists of the Surat Dangs from which the bamboo would come and if you can arrange with the Baroda Darbar to allow the neighbouring area to be bought in and worked together, it might possibly be a good proposition on a small scale, say three to five thousand tons. But the bamboo there is very scattered, the floating streams are rather poor and would only be available for short periods of the year, and I don't think it would compare with any

of the propositions already mentioned, though it might make quite an attractive smaller proposition.

*President.*—What would be the possibilities, assuming that the manufacture became firmly established, of the deliberate cultivation of bamboo as opposed to the exploitation of what grow naturally?

*Mr. Raitt.*—I don't think anybody would favour that. It would not be worthwhile going into, so long as the natural supplies are available.

*President.*—I mention this because Messrs. Andrew Yule & Co., giving evidence before us, said that they were considering the question whether they could not cultivate bamboos in certain areas in Central Bengal. Have you gone into the question at all yourselves?

*Mr. Pearson.*—We considered it, but we think that the land in such areas is so valuable for other purposes—you might plant a little bamboo here and there—that I don't think it can be considered as a really serious proposition.

*Mr. Raitt.*—As soon as you commence to cultivate paper making materials the cost of these materials at once goes up?

*Mr. Ginwala.*—Mr. Sheldon Leicester, writing an article on fibre for paper-making in the *World's Paper Trade Review* of the 6th June 1924, says "therefore there is some reason for meditation, if not perhaps for immediate anxiety, over the world's stock of bamboo for the papermaker as coniferous trees require about 16 years growth to be ready for pulp making."

*Mr. Raitt.*—The answer is that this is obviously a printer's error for 60. r. Leicester knows better than that.

*Mr. Pearson.*—I give the gentleman the benefit of the doubt by assuming at it is a printer's error.

*Mr. Perree.*—I should say obviously.

*Mr. Ginwala.*—You all lay much emphasis on the printer's error. Supposing it was not a printer's error, what is your opinion as experts on the subject?

*Mr. Pearson.*—I should say it is wrong.

*Mr. Perree.*—We simply say that, in the section of Canada which he refers to, the growth of timber suitable for pulp making must involve a longer period, which we would put down at 40 to 60 years.

*Mr. Ginwala.*—With regard to this report of yours in the *Indian Forest Record* of 1916—"Note on the utilization of bamboo for the manufacture of Paper Pulp"—you say that the work was done in 1912?

*Mr. Pearson.*—Most of the work was done in 1911-12.

*Mr. Ginwala.*—What I want to know is whether so much of it as deals with the cost of manufacture and other things would be regarded as obsolete?

*Mr. Pearson.*—Absolutely.

*Mr. Ginwala.*—But the chapter dealing with the properties of bamboo as a fibre?

*Mr. Pearson.*—I don't think so; they are sound to this day.

*Mr. Ginwala.*—The opinion that you gave then has been verified by subsequent experiments?

*Mr. Pearson.*—It has.

*Mr. Ginwala.*—I wish to know about the different kinds of bamboos that you have mentioned; I think you mention 5 different varieties.

*Mr. Pearson.*—There are the *kyathaung*, *tinwa* and the *melocanna*, the single stem bamboo of Arakan.

*Mr. Ginwala.*—The *melocanna* grows in abundance there?

*Mr. Pearson.*—In Arakan, but not in Burma. The *kyathaung* and *tinwa* are the prevailing bamboos in Burma.

*Mr. Ginwala.*—With regard to the big class of bamboo what about the nodes?

Mr. Pearson.—They all go in. In that report I worked on the assumption that the nodes could not be pulped. Now that is all washed out. With crushing and cutting they all go in to make pulp.

Mr. Ginwala.—There you gave the opinion that, if the nodes were not taken into account, 15 per cent. would be lost?

Mr. Pearson.—That is so.

Mr. Ginwala.—Now I want to know what is the result of later experiments with regard to the nodes?

Mr. Raitt.—The nodes can all go in. The wall between the nodes is not very thick; it is the actual fibre built up round the bore of the bamboo that very much thickened, but the actual node inside is not really very thick and it can be crushed.

Mr. Ginwala.—Is there any special crusher invented by means of which I can use the bigger nodes of bamboos?

Mr. Raitt.—The idea is that the worst bamboo which is extraordinarily thick, which is grown in the west coast, you will have to split it up once or twice before you can put it into the crusher to crush it out. In *kyathaung* and *tinwa* there is no difficulty at all.

Mr. Ginwala.—In the sites you have mentioned, in which block does the *melocanna* grow?

Mr. Pearson.—The first is *kyathaung*, the second *tinwa* and the third is *melocanna*.

Mr. Ginwala.—They grow in large quantities in Burma?

Mr. Pearson.—Yes, and in Assam.

Mr. Ginwala.—These percentages of yield that you have given—do they still hold good?

Mr. Pearson.—They were given by the Titaghur Paper Mills and they corresponded, as far as I remember, very closely within one or two per cent.

Mr. Ginwala.—You also give the yield per acre?

Mr. Pearson.—It was done on the right method and very intensely done as compared with other enumerations that have been made. We took sample areas with various species of bamboo. Each stem was counted. A number of culms were then cut down and allowed to dry and the whole weighed in various acres, good, bad, indifferent and so forth. We were making a regular enumeration of very large quantities and they were the most intensive enumerations, as far as I know, and the most careful, that have been made.

Mr. Perree.—I should say the most reliable statistics up to the present.

Mr. Raitt.—I have made one or two enumerations in some of these areas reported on by Mr. Pearson and I see no reason to alter them in the least, and they all tallied with the enumeration of the local officers.

Mr. Ginwala.—The point is that every man who wants to start this industry wants to sit on 15 times the area he ordinarily wants. What I want to know is this: on this basis of yield per acre how many acres would you require for a 5,000 ton unit?

Mr. Raitt.—I would say 40,000 acres would cover most cases, that is, roughly 7 square miles for a 10,000 ton unit.

Mr. Ginwala.—The tendency is in this country for a man to get hold of more than what he really wants.

Mr. Pearson.—He wants no competition there: he wants everything to himself.

Mr. Pearson.—I should say 22,500 acres for a 5,000 ton unit, that is on a 4-year rotation. You require a bigger area for *tinwa* than for *kyathaung*. It takes about 2½ tons of bamboos to make one ton of dry pulp; it takes 145 culms of *kyathaung* and 280 of *tinwa* to make one ton of air-dry bamboo.

Mr. Ginwala.—Now with regard to the flowering of bamboos, is it really any serious drawback to the regular availability of raw material?

Mr. Pearson.—No. We could not have really answered this question 10 or 12 years ago. The experience has been that flowering occurs in large patches in one area but there is no wholesale flowering all over one district. It generally begins, say, on the north of the area and goes slowly forward through the area taking a number of years to complete the flowering. To give you a concrete example, the west coast bamboo started flowering in 1908 or 1909 in the north and took 11 years before it reached Malabar. Those bamboos on upper slopes always flower quicker and in the lower near the rivers they flower 2, 4, 5 or even ten years later; so that you will probably always have some bamboos to fall back upon when the flowering does occur. Moreover, as there are generally more than one species in every forest, the chances of them all flowering at the same time are very remote. The most dangerous in this respect is *melocanna*.

Mr. Ginwala.—The whole area in Arakan is that species?

Mr. Pearson.—A good portion of it flowered about 8 years ago, and towards the bottom of the rivers, I believe, it has not flowered yet. Nobody knows exactly when the *melocanna* flowered before, even the oldest man could not give us any information about its flowering before. In most parts of India, apparently, flowering is all done and finished for some time to come. The only part we are not certain about is Burma, i.e., about *kyathauing*. The flowering there is overdue by ten years already.

Mr. Ginwala.—It does not apply to the same species in two different forests; would it flower at the same time in the two forests?

Mr. Pearson.—That is the trouble. It went from end to end of India. It might have happened that it flowered this year in one area and delayed 5 or 6 years in the next. But plants actually brought from Burma and planted here flowered here at the same time as in Burma.

Mr. Ginwala.—How long after flowering will they be fit to be used? Take the *melocanna*, for instance.

Mr. Pearson.—5 years. It depends upon the species. Another thing you have got to consider is that the dry clumps do not disappear at once and they can be utilized two years after they are dead.

Mr. Ginwala.—So that the trouble might continue only for about 3 years?

Mr. Raitt.—I don't think that it would necessitate the closing down of mills. They might have to pay more by having to go to more scattered areas, but they will be getting bamboos. It would tide them over.

Mr. Ginwala.—With the exception of Arakan, I take it that in the other areas that you have given there may be more than one species of bamboo?

Mr. Pearson.—Not always.

Mr. Ginwala.—Of the areas that you have mentioned this morning, Cuttack is one?

Mr. Pearson.—There they have got two species.

Mr. Raitt.—In Cuttack you have the species—*strictus*—which does not flower all at once. You always find sporadic patches of flowering.

Mr. Ginwala.—It is not one of the four kinds mentioned by Mr. Pearson.

Mr. Raitt.—No.

Mr. Ginwala.—What species have Messrs. Andrew Yule & Co. got?

Mr. Pearson.—They have got one which is not in my Burma report, i.e., *Bambusa Tulda* and they have also *melocanna*, *Dendrocalamus longispatus*, and *Oxytenanthera auriculata*.

Mr. Ginwala.—Are they in abundance?

Mr. Pearson.—Yes, they are. As to the supply from the Chittagong Hill Tracts, they are absolutely safe.

Mr. Raitt.—The first question to be investigated in these cases will be: when did this last flower? If we come to a case where flowering may be expected within 20 years and there is not a second species to fall back upon—

supposing an area produces only one kind and there is not any of that slow period of flowering which Mr. Pearson referred to—then we leave that alone.

*Mr. Ginwala.*—At what intervals do they flower?

*Mr. Pearson.*—Say 40 to 80 years according to the species of bamboo.

*Mr. Ginwala.*—How shall we sum up the present experience in making pulp from bamboo? We have got Messrs. Andrew Yule & Co. recently manufacturing it on a commercial scale. Your own experience as to whether it is a success or not is confined to experiments. Your experiments were conducted for you by the Titaghar Paper Mills.

*Mr. Pearson.*—Yes.

*Mr. Ginwala.*—Then you have the results of certain experiments conducted by Mr. Sindall on behalf of the Government of Burma.

*Mr. Pearson.*—Then we have Mr. Raitt's experience.

*Mr. Ginwala.*—Mr. Raitt's experiment also was conducted by the Titaghar Mills, so far as the practical results were concerned?

*Mr. Pearson.*—No. Mr. Raitt was not with us when those experiments were carried out. He was then working for the United Provinces Government at the exhibition.

*Mr. Ginwala.*—What is Mr. Raitt's practical experience of the bamboo fibre?

*Mr. Raitt.*—It began when I was at the Bengal Paper Mills. I did enough with the bamboo there to instruct me that it was a valuable material and that it was worth a further enquiry.

*Mr. Ginwala.*—When was it?

*Mr. Raitt.*—In the Bengal Paper Mills up to 1902.

*Mr. Ginwala.*—That was before Mr. Sindall's time?

*Mr. Raitt.*—Yes, he came in 1905—after that.

*Mr. Ginwala.*—What I want to know is: did you yourself crush bamboo and make it into pulp at the Bengal Paper Mills?

*Mr. Raitt.*—We did make pulp but not by that method which is an improvement. At the Allahabad Exhibition we did it in 1910 by crushing.

*Mr. Ginwala.*—That was a laboratory plant?

*Mr. Raitt.*—Yes.

*Mr. Ginwala.*—I don't want the results of a laboratory plant.

*Mr. Raitt.*—You have got to come then, with the exception of what I did once or twice in the Paper Mills, to what we are doing now.

*Mr. Ginwala.*—That is only for the last fortnight or so?

*Mr. Raitt.*—A little more than that. It is three months.

*Mr. Pearson.*—On a commercial scale they have done it with the Trinidad bamboo.

*Mr. Ginwala.*—We are not concerned with the Trinidad bamboo. We are only concerned with Indian bamboo.

*Mr. Pearson.*—The Titaghar Mills did a lot of work which was the basis of their attempt to exploit the business in Burma.

*Mr. Ginwala.*—The results, in your opinion, are so favourable that the suitability of bamboo as fibre is established?

*Mr. Raitt.*—Yes.

*Mr. Pearson.*—It is accepted by everybody. The Titaghar Mills during the war used very considerable quantities of bamboo. They could not get the imported sulphite pulp and so they had to use large quantities of bamboo. I saw them myself. They have got a very fair knowledge of what the value of bamboo is. There is no question about it.

*Mr. Ginwala.*—With regard to this question of fresh water, do you mean that the water must be free from all salt or brackishness altogether?



*Raitt.*—Yes.

*Mr. Ginwala.*—What is the quantity of water that would be required?

*Mr. Pearson.*—For a 10,000 ton plant, 40,000 gallons of water would be required per hour.

*Mr. Ginwala.*—For a plant working 24 hours a day, it means a million gallons a day.

*Mr. Pearson.*—It sounds a lot in figures. A comparatively small permanent stream would give you that.

*Mr. Ginwala.*—That is to say, you want 360 million gallons a year for 10,000 tons?

*Mr. Pearson.*—Yes.

*Mr. Ginwala.*—Is it based on calculations?

*Mr. Raitt.*—That is based on pulp making practice in various parts of the world.

*Mr. Ginwala.*—Are you talking of pulp or paper?

*Mr. Raitt.*—Pulp.

*Mr. Ginwala.*—For paper you require more?

*Mr. Raitt.*—Yes, but not a great deal more.

*Mr. Ginwala.*—Besides you have got to filter that water.

*Mr. Raitt.*—In India you will have to do it. At one time of the year you get clean water and at another time dirty water.

*Mr. Ginwala.*—The quantity does not seem to be much, but to filter that water will cost a little money.

*Mr. Raitt.*—Yes.

*Mr. Ginwala.*—It is about 38,000 gallons per ton of output. It comes to about Rs. 3 per ton.

*Mr. Raitt.*—It is nothing like that. You get your water for nothing. Your cost is simply interest on the capital for filters and the small amount of horse power used in pumping.

*Mr. Kale.*—In what other countries does bamboo grow in large quantities?

*Mr. Pearson.*—Phillipines, Trinidad, West Indies, Pacific Coast as far as Cochín China, Straits Settlements, etc.

*Mr. Kale.*—I was asking this question only to know what competition we might have to face.

*Mr. Pearson.*—I should imagine that if we get well started in India we may find the Straits Settlements following suit.

*Mr. Kale.*—We don't want other countries to steal a march over us if the manufacture of pulp from bamboo is an economic proposition.

*Mr. Pearson.*—It was rumoured that Nelsons were starting in Trinidad but they have turned that down in favour of the Chittagong area. So far, we have not heard anything definite.

*Mr. Kale.*—Is it your opinion that we stand favourably compared with other countries?

*Mr. Pearson.*—Decidedly.

*Mr. Kale.*—What exactly is meant by flowering?

*Mr. Pearson.*—Directly the bamboo flowers, the whole clump dies exactly in the same way as grasses. Some grasses do so yearly and some once in three or four years. Bamboos take longer periods and when they flower, they die.

*Mr. Kale.*—How do you get shoots again when they die?

*Mr. Pearson.*—The seeds germinate and to give you a general idea the whole forest looks as if you have got a very light green grass in huge masses—so thick that you could not see the ground even. The small plants go on increasing. In the first year the shoot may be six inches high. The next shoot put up is one or possibly two or more feet and so they go on until the

fight for existence is dependent on the amount of light each individual plant obtains. Those that get further forward than their neighbours kill their neighbours for want of light. Gradually clumps are formed eliminating those that are more backward and filling up the ground in that way.

*President.*—Mr. Ginwala mentioned, in one of the questions he asked, the difficulty that was at one time apprehended from the impossibility at that time of pulping the nodes of bamboos. I understand that they can now be dealt with.

*Mr. Raitt.*—Yes.

*President.*—I gather from your paper, Mr. Raitt, that you read before the Society of Arts that there is a difference of opinion as to the respective merits of crushing and chipping. Has there been any further investigation?

*Mr. Raitt.*—It really does not matter which way it goes.

*President.*—It is not a point of great importance which way you do it? There might be something to be said in favour of each?

*Mr. Raitt.*—The big bamboo of the West Coast will probably have to be chipped because it is exceedingly thick and heavy. All the others we are dealing with on the crushing basis.

*President.*—I take it that part of the experiment you are about to make will include that?

*Mr. Raitt.*—Very much.

*President.*—In another six months you might be in a position to tell us more about it?

*Mr. Raitt.*—Yes.

*President.*—In any case the difficulty has been in that way overcome?

*Mr. Raitt.*—Yes.

*President.*—The other difficulty that at one time stood in the way of utilisation of bamboo was the difficulty about bleaching?

*Mr. Raitt.*—Yes.

*President.*—And the investigations that you have been carrying on for a good long time were specially directed towards dealing with that difficulty and finding a process which would get over it?

*Mr. Raitt.*—Yes.

*President.*—I have read the account you have given of it in your paper. May I take it that what you said there holds good as it stands?

*Mr. Raitt.*—Yes.

*President.*—And it is this process of what you call fractional digestion that is the essence of the thing?

*Mr. Raitt.*—Yes.

*President.*—The point of that, I understand, is that first of all in the process of digestion you use a low percentage of caustic soda to get rid of the unbleachables.

*Mr. Raitt.*—Yes. The unbleachable constituents are the root of the bleaching difficulty.

*President.*—What I understood was that, in the existing plants in India, they use a high percentage of caustic soda to eliminate all the elements which it is desired to remove at one stage.

*Mr. Raitt.*—The first thing we find out is the non-solubles or the non-pulp, the matter which has got to be got rid of. The substances cannot be suitably dealt with in one treatment. There are three different groups of different constituents entirely, each of them varying in their solubility and the more easily soluble ones form two groups of these. We were able to show that these were the ones that created the bleaching difficulty after digestion. They could be extracted at a low pressure with a mild treatment, whereas the third group which is not dangerous to bleaching requires a high pressure and strong treatment. The obvious thing to do is to take the first two groups

One of the needs of the country is an extension of the publication of vernacular literature and a protective tariff will militate against the extension of this activity.

(12) The present position of the paper industry presents no case for protection.

Prior to 1914, import duty was 5 per cent. assessed *ad valorem*. It is now 15 per cent. assessed on the market price. Hence there has been an increase in the levy of approximately 20 per cent. since 1914.

(13) It is notorious that the industry in India has been run in the interests of the Managing Agents and not with the object of showing mill profits or improving the quality of manufacture.

The conditions of control have provided, in the case of the largest mill in the country, for a commission to the Managing Agents on Output and not on profits, hence paper has been and is to-day being dumped on to the market at prices which are known to be considerably below cost.

(14) In answer to the contention of the Indian mills that Foreign competition has compelled them to reduce prices, we can produce facts and figures which prove that both prior to 1914 and since the end of the war the prices of local paper have been needlessly slaughtered.

Practically every Indian dealer from Calcutta to Lahore depends, for the larger part of his connection, upon Indian mill so-called "Job lots."

These "job lots" are makings usually well up to the standard but sold at absurd prices. In consequence practically no competitive imported paper is to be found in these markets.

(15) During the war the mills had 4 years of ideal protection and during that time made enormous profits which have since been absorbed owing to unwise and ill-considered projects in many directions.

A perusal of the Balance Sheets suggests that the present position of the mills is due to over-Capitalisation and the burden of unproductive new plant unadapted for use with the older machinery.

Such enterprises as are private owned and are run in the interests of the owners are showing excellent results.

(16) The price of the standard British Free Printing paper to-day is practically 3d. per lb. writing paper being slightly more expensive.

If with facilities for materials fuel, etc., at their door, the Indian mills cannot compete with the standard British productions to the cost of which

Packing,  
Ocean freight,  
Duty (landed at 15 per cent. on the local market price),  
Importing charges,

have to be added, the inference is, not that the case for protection has been established, but rather that the administration of the industry needs to be examined and reorganised.

The increase in landed cost over the British price at mill is equivalent to an advantage in favour of the Indian mill to at least 33½ per cent.

(17) Owing to the succession of misfortunes that has overtaken paper industries in India, as the result of lack of foresight, technical skill, knowledge of the market, etc., on the part of the administration, it is doubtful whether money would be forthcoming from the general market in support of new ventures at the present time.

(18) The general situation in the paper trade universally is most precarious and in the last 12 months about half a dozen British concerns have had to close down. The raising of money to support an extension of the industry in India would be a matter of great difficulty in the open market.

We shall be glad to furnish further information on any of the foregoing points in case this is required and look forward to the opportunity of representing the case orally when the Board sits in Calcutta in August.

away from the material and expel them before you tackle the third. The effect of that is that the change from raw material into pulp which occurs at high pressure takes place in the absence of those. If it takes place in their presence, as the old method insisted on, the result is that the pulp, which is one of the most absorbant materials we have, as is evidenced by the use of blotting paper, reabsorbs the unbleachable matter. So we digest in their absence in order that there is nothing for it to reabsorb.

*President.*—There will also be nothing to affect the colour?

*Mr. Raiff.*—If it is taken along with the re-absorbed colour, it had to be killed by excessive bleaching. That is the whole thing.

*President.*—Some process which got over this difficulty was indispensable, I understand, if bamboos were to be used at all?

*Mr. Raiff.*—Yes.

*President.*—I take it that the process which Messrs. Andrew Yule & Co. are using at present has in some way got over this difficulty?

*Mr. Raiff.*—Yes. I do not know what their bleaching costs are.

*President.*—You can judge from what they actually turn out. So it appears that there is an alternative means of getting over it?

*Mr. Raiff.*—Yes.

*President.*—Then the process which you have discovered, while it is indispensable for bamboos, is also, I understand, very advantageous to those manufacturers who use grass?

*Mr. Raiff.*—Yes.

*President.*—Would it be capable of use for other materials?

*Mr. Raiff.*—It can be used for all grasses which contain the two groups of unbleachable matter in any quantity. Wood contains only a trifling quantity. Grass contains a very large percentage. Somewhere about 30 per cent. of the total weight consists of these two groups.

*President.*—Taking it on the basis of grass, supposing you had a mill in India which was using grasses according to traditional methods and not making its own bleach, what reduction in the amount of bleach required would be effected by the adoption of your process of fractional digestion?

*Mr. Raiff.*—Under this process, you only require half the quantity.

*President.*—Apart from the quantity of bleach required, would there be any other saving?

*Mr. Raiff.*—There is a small saving in the soda.

*President.*—I was thinking at the moment of the bleaching stage.

*Mr. Raiff.*—There is a slight increase in pulp yield, perhaps 2 per cent., because the process permits the digestion to be carried out at a lower temperature. The chief agent in the destruction of fibre is high temperature. Inasmuch as we can digest it at, say, 15 lbs. lower pressure by this method, we get a corresponding lesser destruction of fibre.

*President.*—But in the case of a mill which manufactures its own bleach by the electrolytic process I take it that, whatever their bleach costs, if they only require half the quantity, the saving would be half the cost of bleach.

*Mr. Raiff.*—That is so. The electrolytic production of bleach does not save bleach consumption but it reduces the cost. The consumption would be the same.

*Mr. Glinvala.*—It prevents waste?

*Mr. Raiff.*—Yes.

*President.*—The other saving that is effected by the method of fractional digestion is in the amount of caustic soda you use?

*Mr. Raiff.*—There is a small saving there.

*President.*—What is the proportion compared to the old method?

*Mr. Raitt.*—It would vary with the material, but with grass it is 3 per cent. on the weight of grass. At present the mills are using 16 per cent. and we are doing with 13 per cent. That is 3 lbs. on 100 lbs. of grass. It is roughly a fifth of the total.

*President.*—Taking as your basis the weight of soda used by the Paper Mills, do you mean a reduction of 20 per cent. in the amount of soda used?

*Mr. Raitt.*—It is nearly that. It is 3 on 16.

*President.*—This process of fractional digestion until the current year had only been tested on a laboratory scale?

*Mr. Raitt.*—No. We had experiments in mills also in Scotland, that is in Esparto mills.

*President.*—Has it been generally used in Indian mills too?

*Mr. Raitt.*—No. I was able to show it at the Bengal Mills where I did it. They got the bleach saving claimed all right, but the nature of the plant would not allow us to check the saving on soda.

*President.*—The saving of soda means the use of digesters different from those in use in Indian Paper Mills?

*Mr. Raitt.*—Yes.

*President.*—In Scotland?

*Mr. Raitt.*—They have also got the same digesters. Bleaching figures have been proved but the soda figures have been left alone.

*President.*—In the plant that you have been working for the last three months the results were better than in laboratory experiments?

*Mr. Raitt.*—Yes. It is somewhat unexpected to ourselves, but it is explainable by the fact that grass digestion happens to be one of the few cases where mass helps us beneficially.

*President.*—In which way is it better?

*Mr. Raitt.*—In both soda and bleach. If you would like to pursue the matter further you can ask Mr. Sundgren who has come here with his experience of the pulp industry. You might ask him about it.

*Mr. Sundgren.*—I naturally have only had a brief look. I have not been able to see from beginning to end, but I have seen the results turned out from the machines, and personally I would draw attention to the very nice colour obtained from grass. I understood from Mr. Raitt that he has not done enough bamboo tests to satisfy himself yet. I have checked his report on bleached grass and I see the importance of this, looking at the colour of the grass pulp produced. What I should like to draw attention to is that the using of this method on grass will not only mean a saving in bleach of half the bleaching powder, but also in many instances it will cut out the bleach altogether, because with that colour of pulp you can use it without bleaching powder, while you could not do it before.

*President.*—Take the case of the *badami* paper turned out by the mills at present, do they use bleaching powder for that at present?

*Mr. Raitt.*—I am not sure whether they do. In the Lucknow mills they use bleach for *badami* and for what you may call half bleached paper.

*President.*—There are different colours of *badami*. You might use bleach for some and not for others.

*Mr. Raitt.*—Generally for what they call half bleached paper. There are several grades of half bleached paper and you may take it that this pulp would come in for all half bleached paper without using bleach. There is another point that ought not to be overlooked. If you use this in the unbleached condition for paper for which it is suitable, you get a 7 per cent. bigger yield. If you bleach you reduce your yield by 7 per cent. We brought out that difference before. The paper yield of bleach is 33 and the pulp yield is 40. You save the loss of fibre in bleaching. That saving we have not counted at all in these figures.

*President.*—In order to introduce this system of fractional digestion into the existing paper mills what part of their plant would have to be replaced?

*Mr. Raitt.*—Their digester plant.

*President.*—Can you give us any idea in a general way, taking as a basis the 10,000 tons plant, what the minimum cost would be?

*Mr. Raitt.*—Mr. Sundgren worked out the figures last night.

*Mr. Sundgren.*—We counted on a plant similar to the Bengal Paper Mills —6,000 tons—and we arrived at a figure round about Rs. 1 lakh for the digestors. There it must be remembered that in most of these mills working here, their boilers have been in operation since the mills started, and I think we have to adopt a new system or they would have to replace their present boilers. The boiler cannot be used for ever naturally because it gets thinner and thinner and there is the increased risk in handling them at the high pressure employed. We also tried to estimate the price of remodelling the plant and this, complete with the washing arrangement as applied by them and the price of the plant, will be very much the same as a re-equipment of the present system. Probably they could use most of their breaking arrangements. In that case the new plant would be more expensive by about 30 or 40 per cent. if they could use all their washing engines, but I think this increased cost will be outweighed by the advantages.

*Mr. Raitt.*—We were going on a modern digester plant which would abolish the breaker system.

*Mr. Sundgren.*—If you cut out the breaker which is saved by this method the cost of a new fractional digester plant is very little more than the cost of a new outfit on the present system. When remodelling their existing plant on the old system they can use their washing engines. If they can be repaired and used, their renewals and so on would be cheaper than putting up on the new system, but I think that the difference is small enough to be paid back very soon.

*Mr. Raitt.*—In other words you would visualise the necessity of having to replace the digester plant in any case and when the time comes when it has to be replaced, the cost of replacement on this system would be very little more than the cost of replacing it under the other system.

*President.*—If you adopted the plant on your system, would it involve the elimination of certain kinds of plant that are used at present for breaking?

*Mr. Raitt.*—We anticipate that. Knocking out what we call the breaker section with which the long grass that they now produce from the digester is pulled out before it can be bleached.

*President.*—How does your process get rid of the necessity of doing it?

*Mr. Raitt.*—In blowing out the digested pulp under pressure the effect of that is the breaking effect. It is like an explosion. You may visualise in an individual bunch of fibres that it is full of steam at 60 lbs. pressure. You suddenly release that and it bursts that fibre to pieces.

*Mr. Sundgren.*—You must remember that that system does not involve any power at all whereas the Bengal Paper Mill uses 100 H.P. to break the grass down.

*President.*—So it ought to lead to a decrease in the consumption of coal?

*Mr. Raitt.*—Yes.

*President.*—I have read your pamphlet on the subject of the Cuttack scheme for a pulp mill there. That is pretty recent, 1923, is it not?

*Mr. Raitt.*—Yes.

*President.*—May I take it that the figures you have given as your estimate of the cost of production may practically supersede all the older figures you have given, and that for practical purposes we need not go behind the Cuttack figures?

*Mr. Raitt.*—No. Mr. Sundgren may tell you whether the figures as regards equipment are fair or not—Rs. 21 lakhs.

*Mr. Sundgren.*—As it happened we have got a request from the Director of Industries of Bihar and Orissa to give our opinion on Mr. Raitt's report. I suppose he was interested in the scheme particularly in Bihar and Orissa, and in our answering letter we pointed out item by item what we thought of the report and naturally we were competent to put down our own prices. We found that the prices given by Mr. Raitt very well covered all items of machinery.

*Mr. Ginwala.*—What year's prices are these?

*Mr. Raitt.*—Last year, 1923.

*President.*—Then you think that this figure of Rs. 21 lakhs is reasonable so far as the plant and machinery are concerned?

*Mr. Sundgren.*—I consider these figures well enough for an up-to-date equipment—for a really scientific equipment. That is Mr. Raitt's intention. As far as this figure goes for buildings we have recently had an estimate from the Director of a Paper Mill of a slightly less dimension than this amounting to Rs. 4½ lakhs for buildings. Compared with the figure given for the Cuttack scheme that figure is cheaper too.

*President.*—It makes a considerable difference if the pulp can be produced at a capital cost of Rs. 21 lakhs. That is so much less capital on which the manufacturer will not have to earn a profit.

*Mr. Pearson.*—The Carnatic Mills, I think, cost Rs. 19 lakhs.

*Mr. Sundgren.*—I think it is Rs. 16 or 17 lakhs.

*President.*—In your Cuttack figures the quantity of coal you take is 1½ tons.

*Mr. Raitt.*—Yes.

*President.*—That is a larger quantity than is required as compared with European practice.

*Mr. Raitt.*—There it is one ton at the most.

*President.*—I take it you left a margin over the European partly on account of the inferiority of the Indian coal and partly as a safety margin?

*Mr. Raitt.*—Yes.

*President.*—The figures we have had so far, I think, from the various people who have given evidence have involved a higher coal consumption than that. I should like to put to you a hypothetical case. If it were found that the coal consumption of an Indian mill was abnormally high, what are the most probable causes?

*Mr. Raitt.*—Inferior steam-saving devices.

*President.*—That would be the first point for enquiry?

*Mr. Raitt.*—Whether they have adopted the latest steam-saving devices.

*Mr. Ginwala.*—That has got nothing to do with paper making machinery?

*Mr. Raitt.*—It has a great deal to do with the consumption of coal.

*Mr. Ginwala.*—It includes some engines and boilers. What I mean to say is that that part of the plant is not used only in paper making.

*Mr. Raitt.*—No.

*Mr. Ginwala.*—When you talk of antiquated machines it is not paper making machinery that you think is antiquated but it is the subsidiary machinery?

*Mr. Raitt.*—Everything. You are right in putting it this way that during the last 20 years there has been greater advance made in what you call subsidiary machinery—power plant—than there has been in actual paper making.

*President.*—Apart from the actual coal used in the production of steam, there is the question of economy or saving in steam?

*Mr. Raitt.*—Yes.

*President.*—You have already told us that the adoption of your new process does involve a certain economy in the use of steam. Does your process accelerate the digesters for instance?

*Mr. Raiff.*—Yes.

*President.*—Is there any way which occurs to you by which, apart from what we have already mentioned, the consumption of coal per ton of output can be reduced in India?

*Mr. Raiff.*—Yes. I think you have got that already in the figures that we have adopted in the Cuttack report. We have adopted in this report the provision of the latest and up-to-date steam-saving plant which no mill has got now. Titaghur is making efforts now to improve their conditions, but I think a great deal has yet to be done in that direction. If you take the present plants as they are now they are mostly extremely antiquated.

*President.*—Will you be able in this plant that you have here to make any experiment?

*Mr. Raiff.*—No we cannot. This is one of the things which you cannot get at, unless you do it on a very large scale.

*Mr. Pearson.*—Our steam plant is intended to deal with three different sections, paper pulp, the seasoning plant and the timber preservation.

*President.*—Apart from what is done at Titaghur, do the other mills recover their soda?

*Mr. Raiff.*—Lucknow does nothing; Kankinara does nothing. Titaghur Mills and the Bengal Paper Mills recover it.

*Mr. Ginwala.*—The Bengal Mills did put up a new plant after the war.

*Mr. Raiff.*—Yes.

*President.*—I should like to ask something about the question whether under Indian economic conditions, pulp mills should be established near the raw materials or elsewhere.

*Mr. Raiff.*—I think it is entirely a matter of distances. There is just a possibility that Andrew Yule Co., do not suffer much, and there is an equal possibility that the Cuttack people might not suffer much, but if you get any further away you would suffer a good deal.

*President.*—That is to say, in any given case the question has to be investigated and one item set off against another?

*Mr. Raiff.*—Yes.

*President.*—But your opinion is that, as distance increases, the advantage of having a mill near the raw materials increases also?

*Mr. Raiff.*—Yes.

*President.*—If one had to make a calculation of that kind the chief things to be taken into account in favour of putting the mill near the raw materials would be the freight to be paid on the raw material if the mill were established elsewhere. On the other side an important item would be the freight on coal.

*Mr. Raiff.*—Yes.

*President.*—In addition to that, would it not be necessary to duplicate the drying machine?

*Mr. Raiff.*—Yes.

*President.*—Taking again a 10,000 ton mill, could you give us the minimum figure for the cost of drying machine or if there is any other part of the plant that has to be duplicated?

*Mr. Raiff.*—Rs. 1½ lakhs would be the cost of duplication.

*President.*—There would also be a certain amount of duplication of expert supervision. What I understood was that probably it would be necessary to have certain men in charge of the machinery part of it, not a pulp expert but a mechanical engineer at each place.

*Mr. Raiff.*—You would still require to have a pulp expert. You simply remove him from the pulp mill to the paper mill.



*President.*—I don't quite follow.

*Mr. Raitt.*—You must have a pulp expert wherever you may put him, whether you put him at the pulp mill there or the paper mill here.

*President.*—If you have the two mills combined, one man would be sufficient to take charge of the machinery and so on?

*Mr. Raitt.*—There would be some difference, but I don't think is very big.

*President.*—I suggest that, if there are two mills instead of one, competent supervision for the power machinery, etc., would have to be provided in each of them.

*Mr. Raitt.*—It would not be more than another Rs. 15,000 per annum; that would be the amount of duplication in that direction.

*President.*—You are working on the basis that in the combined mill you would require an Engineer and an Assistant Engineer, but that with two mills you would require 3 Engineers?

*Mr. Raitt.*—That is the idea.

*President.*—On that basis it is just a question of the salaries offered?

*Mr. Raitt.*—Yes.

*Mr. Ginnala.*—You will have first of all to have a smaller unit, won't you, in the pulp mill for producing power?

*Mr. Raitt.*—Yes.

*Mr. Ginnala.*—And you will have to have an extra unit for paper?

*Mr. Raitt.*—We will have more in the paper mill.

*Mr. Ginnala.*—But if you have the two together it would be much cheaper, would it not, as regards the initial capital cost?

*Mr. Raitt.*—Certainly.

*Mr. Ginnala.*—And the cost of running also would be less on a bigger unit?

*Mr. Raitt.*—Yes.

*Mr. Ginnala.*—Then there is the additional process of drying and afterwards the additional process of beating.

*Mr. Raitt.*—There is nothing there.

*Mr. Ginnala.*—But there is the extra process of drying which involves certain extra use of power which we took at Rs. 5 a ton including additional labour.

*Mr. Raitt.*—That is right.

*President.*—If the mill were established near a port where ocean-going steamers regularly call, there might be no additional cost to the pulp mill on imported material of various kinds. At a port like Chittagong the imported chemicals might come in as cheaply as at Calcutta. But, if the pulp mill were established at a small port, they might from time to time have the additional cost of having to tranship.

*Mr. Raitt.*—The chemical consumption of imported chemicals in a pulp mill is a mere trifle. At the paper mill it is great because you have got to import the bleach, the china clay, sizing material, alum and so on, quite a host of things. In the pulp mill it is a mere trifle for the reason that the pulp mill would recover its own soda, about 80 per cent., and regenerate it into caustic soda with lime, which is obtained locally.

*President.*—Would your lime necessarily be obtained locally? Does it exist in the neighbourhood of these areas?

*Mr. Raitt.*—Always. Some of them in most excellent conditions. The point is that the imported chemical is only 20 per cent. of the total consumption. In a 10,000 ton pulp mill the import of soda will be something like 400 tons per annum.

*President.*—Is an 80 per cent. recovery an average figure?

*Mr. Sandgren.*—It is a fair thing at Home. We have seen recovery in only one mill and that turned out between 70 and 80 per cent.

*Mr. Ginwala.*—Has your process been patented?

*Mr. Raiff.*—Yes.

*Mr. Ginwala.*—So that any man who wants to use it will have to take a license from you?

*Mr. Raiff.*—Not from me. A private Limited Liability Company has taken it up. They manage it and they own it.

*Mr. Ginwala.*—What is the name of the Company?

*Mr. Raiff.*—The Paper Pulp Patents Limited.

*Mr. Ginwala.*—Do you know whether your process has been adapted by any company?

*Mr. Raiff.*—No. We have never put it forward; we have been waiting for further proof. It has not been advertised yet.

*Mr. Ginwala.*—The trouble is that you have got a patent process and Messrs. Andrew Yule & Co. have got theirs, and if the industry has got to depend on patent processes, it becomes rather a difficult business.

*Mr. Raiff.*—There are others. A complete plant involves the use of probably a dozen patents, but the object of invention is to help, not to hinder industry.

*Mr. Ginwala.*—I wish to know whether it would materially increase the cost, if licenses are to be applied for.

*Mr. Raiff.*—Not materially. Per ton of pulp the cost would be trifling.

*Mr. Ginwala.*—If many of the existing companies wanted to take it up?

*Mr. Raiff.*—Neither they nor this Company has got so far as that yet.

*Mr. Ginwala.*—It is a very important item in the cost of production.

*Mr. Raiff.*—No Sir. Very unimportant.

*Mr. Ginwala.*—You yourself have given us figures, have you not?

*Mr. Raiff.*—Not as regards cost of all the patents involved. These are all included in our plant estimates.

*Mr. Ginwala.*—I am not talking of that cost. Does it reduce the cost of production?

*Mr. Raiff.*—Yes.

*Mr. Ginwala.*—The point is, it also involves the purchase of machinery, the cost of which you have put down as one lakh of rupees.

*Mr. Raiff.*—It would pay to put in our digester plant to replace the old ones here. It would pay to do that to effect steam and other savings independently entirely of the fractional digester. If the fractional digester did not exist, it would still be necessary to replace the old machinery on economic grounds.

*Mr. Ginwala.*—That would apply to the soda process only?

*Mr. Raiff.*—Yes.

*Mr. Ginwala.*—Can your process be used by those using the sulphite process?

*Mr. Raiff.*—No.

*Mr. Ginwala.*—What I wanted to know was the proportion of chemicals and things that made up this total cost of production in your report. With regard to coal you have given the quantities but with regard to the chemicals, for instance, the chemicals used in the pulp making plant, you have not?

*Mr. Raiff.*—If you look at page 6 of the Cuttack report you will find it discussed under the heading of lime. The figures are given there "The cost of the equivalent in liquor of one ton of caustic soda under the above conditions will be Rs. 80."

*Mr. Ginwala.*—You are giving the cost in rupees; I want it in quantities.

*Mr. Raitt.*—If you go on a little further, you will find a consumption of 18 per cent of soda, that works out to 9 cwt. of caustic soda per ton of pulp.

*Mr. Ginwala.*—That is the gross consumption?

*Mr. Raitt.*—Yes.

*President.*—That is to say, if you do not make it yourself you will have to import 9 cwt. per ton. That is subject to whatever you recover afterwards?

*Mr. Raitt.*—Yes.

*Mr. Ginwala.*—So that if you make 80 per cent. recovery it is less than 2 cwt. What is the next principal chemical?

*Mr. Raitt.*—There is none in pulp.

*President.*—How much of lime and how much of soda have you got in 9 cwt. of caustic soda?

*Mr. Raitt.*—A chemical transformation takes place in the fusion of lime and soda which throws the lime altogether out. The lime consumption is equal to  $7\frac{1}{2}$  cwt. per ton of pulp.

*Mr. Ginwala.*—That is used every time? Give me the gross quantity of caustic soda you will have to use before recovery.

*Mr. Raitt.*—Then you don't want the lime. Caustic soda makers in England use the lime for your benefit.

*President.*—You import caustic soda as caustic soda?

*Mr. Raitt.*—Yes.

*President.*—How much lime and how much soda does the manufacturer in England require to make a ton of caustic soda?

*Mr. Raitt.*—I cannot tell you.

*Mr. Ginwala.*—You start with the carbonate of soda. How much of that do you require?

*Mr. Raitt.*—Except for losses we would use about 12 cwt. of carbonate of soda to produce 9 cwt. of caustic soda. You will transform the condition of the soda from one form to another.

*Mr. Ginwala.*—And then you require  $7\frac{1}{2}$  cwt. of lime per ton of pulp?

*Mr. Raitt.*—To make the alteration in the state of the soda, to change it from comparative inert carbonate to caustic.

*Mr. Ginwala.*—That is obtained locally?

*Mr. Raitt.*—The Magadi Soda Company are manufacturing it. If the East African Company goes on it will be a most valuable help to this business in India.

*Mr. Ginwala.*—Will you express any opinion on the paper part of the manufacture?

*Mr. Raitt.*—I don't think I can tell you anything about paper.

*Mr. Ginwala.*—You refer here (in your Cuttack Estimate) to Rs. 96 a ton for chemicals? Is it merely for caustic soda?

*Mr. Raitt.*—Yes.

*Mr. Ginwala.*—That is to say, ready-made caustic soda?

*Mr. Raitt.*—No. That is our own manufacture at the mill from the recovered soda plus 25 per cent. loss. You will observe there I have taken 18 per cent. caustic soda; we are trying the same bamboo here with 16. In the supplementary report which has got to be published by the Bihar people, dealing with the result of what we are doing now, a few of the figures will be corrected and the cost of soda will be brought down from 18 to 16 per cent.

*Mr. Ginwala.*—When do you expect to get your plant going fully?

*Mr. Raitt.*—It will never go continuously.

*Mr. Ginwala.*—I mean in such a way that you can get reliable costs.

*Mr. Raitt.*—I should say within a month or six weeks.

*Mr. Ginnala.*—Would you mind giving your costs on the lines on which we have asked for them from the Paper people?

*Mr. Perree.*—We can only give you the chemical part of the business but not the coal consumption. So far as the amount of soda required, and the amount of bleach required, we can give information of that sort. We cannot give you the coal consumption because we have got a multiple plant. We are not working on one unit.

*Mr. Raitt.*—We can give you the steam consumption in a form by which you can make a broad comparison without going into quantities or figures, that is to say, we can say bamboo digested by the ordinary method will take 8 hours of steam in the digester and by fractional it will take so many hours.

*Mr. Ginnala.*—That would be very useful.

*Mr. Raitt.*—We can give you that.

*Mr. Kale.*—From what you have told us I understood that the places where pulp can be manufactured out of bamboo have been as it were fixed by nature.

*Mr. Raitt.*—Yes.

*Mr. Kale.*—You would like that pulp should be separately manufactured there and that paper should be manufactured out of that pulp either near the pulp factory or elsewhere as would be found economical. Do you think that the pulp that may be manufactured at any one or more places that you have described, can be utilised by the existing mills at an advantageous cost?

*Mr. Raitt.*—Yes.

*Mr. Kale.*—Do you believe, for example, that the Lucknow Mills can use the pulp manufactured in one of the sites in Burma?

*Mr. Raitt.*—No. There you have complicated it with the high railway freight.

*Mr. Pearson.*—It would be quite a feasible proposition to take the pulp to the Bengal Mills, but it would not be possible to take it to Lucknow which is situated near grass, which is an excellent raw material.

*Mr. Kale.*—We have in India large markets in Calcutta, Madras, Bombay, Lahore, etc. The paper factories using the pulp manufactured in Burma can cater only for certain markets, and unless you can put down your pulp at a reasonable cost in factories located elsewhere, your pulp cannot be used in India profitably. That is my difficulty. You will have to concentrate paper manufacture in Bengal near your Burma sites; otherwise foreign manufacturers will compete?

*Mr. Pearson.*—Quite right.

*Mr. Kale.*—What are the possibilities, therefore, of pulp manufacture in Burma, dependent as it will be upon the extent to which it can be utilised by Indian mills? Independently, taken by itself, the manufacture of pulp seems to be a hopeful proposition but the manufacture of pulp is not an end in itself. It is a means to an end and therefore in order that pulp may be utilised profitably the cost of transport must be reasonable. So, the next question is to find out what will be the limit to which it can be taken. So far as Bengal is concerned it appears that the pulp manufactured in Burma can be used.

*Mr. Raitt.*—Outside of that you have only got Lucknow to think of at present.

*Mr. Kale.*—If capitalists in Madras find that pulp is produced at a reasonable price, they may want to establish a factory there, seeing that the sea freight is comparatively low. It may be possible for the Madras factory to utilise the Burma pulp. So, I want to ascertain what are the limits or what are the possibilities of the use of Burma pulp?

*Mr. Raitt.*—You could take any place within a reasonable distance from any of the main ports, viz., Calcutta, Madras, Bombay or Karachi.

*Mr. Kale.*—Do you think that it is in any case safe to assume that pulp can be taken to those places mentioned by you at a reasonable cost?

*Mr. Raitt.*—Yes.

*Mr. Kale.*—Pulp can be used as a raw material in those three or four places if factories are put up there? The only difficulty is that, if pulp is to be transported inland, then the question of railway freight comes in?

*Mr. Raitt.*—Yes.

*Mr. Kale.*—Do you think that, so far as Lucknow or the Punjab are concerned, *sabai* grass has got a monopoly?

*Mr. Raitt.*—Yes.

*Mr. Kale.*—Practically the ground is cut out for it, where the Burma pulp cannot compete?

*Mr. Raitt.*—Yes.

*Mr. Kale.*—As Burma pulp goes into the market, the demand for and the price of *sabai* will go down and it may be possible for mills to produce grass pulp at a reasonable price?

*Mr. Raitt.*—Quite so.

*Mr. Kale.*—May I take it, that the problem of the manufacture of paper may be solved in this fashion, viz., certain factories on the sea board are to use Burma bamboo pulp and other factories, which are in the interior, are to concentrate upon *sabai* and other grasses which cannot bear heavy railway freight?

*Mr. Raitt.*—Yes. But I doubt very much whether there is much scope for more than one grass mill in the interior.

*Mr. Kale.*—You take Lucknow as one of the factories using *sabai*. Then, we have this morning discussed the position of the Punjab Factory and we have found that it has secured its own supplies on an adequate scale and it won't go into areas where the Lucknow factory draws from. The places of these two factories are fixed as it were. You have then got a proposition down in Madras. We do not know what its possibilities are. As your pulp can be taken to Madras, you can have one factory there. Then we do not know anything about the Surat proposition. As we have transport facilities there, we may have a factory there also. In that way you can have factories located in different tracts, using bamboo or *sabai* pulp as the position of the factories may allow, and the whole demand of the country may be satisfied by manufacture in India.

*Mr. Pearson.*—Yes. There is no reason why it should not be met like that. We can, I think, eliminate for the moment any of the possibilities of other factories such as the Kamat scheme or the Tinnevely scheme which will get their own supplies from areas not situated on the sea. Such mills will be self-contained.

*Mr. Kale.*—I have taken into account such schemes as Tinnevely and Kamat propositions for the reason that the railway freight from the ports into the interior will be found to be rather prohibitive and therefore such mills have their supplies and markets fixed for them, as it were, by natural conditions. As to the possibilities of Burma pulp, it cannot be produced profitably unless it can be exported to foreign countries or utilized in India; and there is not much hope for the export of pulp from Burma. In order then that your pulp manufacture may flourish in Burma, you must find a market for it in India or outside. If you are not able to export to foreign countries, it must find a market inside the country. Now, where is the market inside the country? I was enquiring whether that market could be supplied in Bengal, Madras and Bombay. Unless there is a sufficient demand in these tracts, the Burma pulp manufacture cannot profitably be carried on?

*Mr. Pearson.*—That is an important point. The Khandesh grass might establish a position for itself perfectly equal to the *sabai* grass in the United Provinces and possibly also in the Punjab.

*Mr. Kale.*—Do you think that the pulp produced in Burma will find a sufficient demand in the country?

*Mr. Raitt.*—Yes, otherwise we would never encourage at any time the floating of a company in Burma. Now there is a demand in Calcutta for at least 12,000 tons a year to replace the foreign imported pulp. We would naturally say that there is plenty of room for a 10,000 ton plant to be started in Burma, but if it is a question of a second mill, before we give any encouragement we would like to see where the market for it is. The establishment of the first mill would no doubt solve to a certain extent the question as to the possibility of export to other countries like Japan and Australia, as they would certainly send some to those places.

*Mr. Kale.*—So that the two things may be tried practically side by side, viz., export to foreign countries and internal consumption?

*Mr. Raitt.*—Yes.

*Mr. Perce.*—I don't think that it can be influenced artificially in any way to any good purpose. The development must take the natural course.

*Mr. Ginnala.*—Mr. Raitt, have you got any recent cost of production of pulp in other countries?

*Mr. Raitt.*—The cost of wood pulp in Sweden of a corresponding quality to bamboo pulp is about £13 a ton. By common consent the selling price of Swedish pulp is practically the cost price at present. They make no profits.

(At this stage Mr. Bhargava was called in and examined.)

*President.*—Will you tell us how you came to take up paper manufacture as a business, I mean how you came to think of that line?

*Mr. Bhargava.*—After taking my M. Sc. degree, I wanted to go in for some technical line and one of the Directors of the Lucknow Paper Mills had an idea of starting a sabai grass pulp making mill in the Terai district. I joined the Agricultural Research Institute, Pusa. About that time the United Provinces Government advertised for a technical scholarship, and paper manufacture was one of the subjects proposed. I applied for it and got the scholarship. After spending about a year at the Lucknow mills I was sent to England. I stayed there for about three years. I was for two sessions in the College of Technology at Manchester. I spent a year in two mills and then I spent a few months in Germany in paper mills. On my return to this country after a few months I joined this Institute.

*President.*—How long have you been in this Institute?

*Mr. Bhargava.*—It is just a year now. It was one of the Directors of the Lucknow paper mills who encouraged me on to take up this industry.

*President.*—It is interesting to us because the possibility of big developments of this Indian industry does depend to a very large extent on Indians throwing themselves into it.

*Mr. Bhargava.*—It more or less moves in a vicious circle. Unfortunately those graduates who want to go in for some technical line, even if they try, don't find an opening just at present. At the same time, it is also true that very few of us take to this line, because it has not been looked upon with such favour as other professions or Government service.

*President.*—What we are interested in particularly is how did you find things when you went to England and spent a year in the paper mills there? I take it that you were working there like any other workman in the mills in the various processes?

*Mr. Bhargava.*—Yes.

*President.*—Did you find it difficult to throw yourself into that?

*Mr. Bhargava.*—Not at all. As a matter of fact, the workmen were very good to me and helped me at every stage. I did not feel at all any disagreeableness or hardship of the work.

*President.*—It was only a hardship involved in manual labour to which you were not accustomed?

*Mr. Bhargava.*—Yes, but I had spent a year at the Lucknow paper mills.

*President.*—Do you think that others of your countrymen, if the opportunity is offered, would throw themselves into the thing and become really keen and interested in it?

*Mr. Bhargava.*—I hope they will. There were two of them when I was in Manchester. One of them continued in the College and took a Degree in Paper Technology. He has been now more than a year in the German Paper Mills and he is very keen about it and he has good experience now. There are others of course who have taken to this line. Some of them have been sent by the various Local Governments, but I should not say that everybody sent out will take to it wholeheartedly. But now things have changed and it is not what it was a few years ago, when we considered manual labour as beneath our dignity. Things have changed now.

*President.*—A change like that would naturally be a slow one.

*Mr. Ginwala.*—What University Degree were you talking about?

*Mr. Bhargava.*—I took the M.Sc. Chemistry degree of the Allahabad University.

*Mr. Ginwala.*—How old were you at that time?

*Mr. Bhargava.*—21.

*Mr. Ginwala.*—You then put in a year at the Lucknow paper mills?

*Mr. Bhargava.*—Not immediately after that. I tried to get a technical scholarship. That year the United Provinces Government offered a technical scholarship for sugar.

*Mr. Ginwala.*—How long after taking your degree did you go to the United Kingdom?

*Mr. Bhargava.*—After five years.

*Mr. Ginwala.*—Then you remained one year in the Couper Mills. Did you try to specialise in any one department?

*Mr. Bhargava.*—I did not try to specialise. I was just trying to have a look into the different processes and I worked in all departments there.

*Mr. Ginwala.*—You did not want to specialise particularly in pulp?

*Mr. Bhargava.*—I spent my time in all the departments, including pulp and paper making.

*Mr. Ginwala.*—What I wanted to know was what is the manual work that you had to do and which at one time was considered undignified. What is the sort of manual labour?

*Mr. Bhargava.*—For instance, in the pulp house to bring the raw material and to fill it in the beaters.

*Mr. Ginwala.*—You do not personally carry raw material to fill it in the beaters?

*Mr. Bhargava.*—I used to do it sometimes.

*Mr. Ginwala.*—Do you mean to say that you yourself carry the material and put it into the beater?

*Mr. Bhargava.*—I had to do it.

*Mr. Ginwala.*—Is it necessary for a man in order to learn how a beater works that he should do it?

*Mr. Bhargava.*—Theoretically it may not appear necessary, but until a man does every mill job himself he cannot know the difficulties of it.

*Mr. Raitt.*—The success in the work of a beater requires a great deal of skill, and you can only acquire that by watching the pulp in the beater and see to it yourself. If you want to learn it, you take the materials and put them into the beater and with every basketful that you put in a change takes place which would train the eye and the fingers. You put a basket less or more and it spoils the result. That is the sort of thing which you can only acquire by actually feeling the state of the pulp in the beater.

*Mr. Ginwala.*—What is the capacity of the beater in the Couper Paper Mills?

*Mr. Bhargava.*—4 to 5 cwt.

*Mr. Ginwala.*—How much of manual labour is involved in this which an Indian will not undertake? Do you think to do it you will have to fill the whole beater yourself?

*Mr. Bhargava.*—Of course one ought to.

*Mr. Ginwala.*—Is it essential for your purposes that you should handle this material every day and all day long in order to learn your work at the beater?

*Mr. Bhargava.*—I think so.

*Mr. Ginwala.*—And you did it every day?

*Mr. Bhargava.*—Yes.

*Mr. Ginwala.*—It seems rather unusual that you should regard it as essential.

*Mr. Bhargava.*—For instance, if an apprentice goes to learn the art of beating, there is nothing to learn there except to feel the stuff and handle the stuff.

*Mr. Ginwala.*—It does not necessarily mean that you should carry it in your own hand. If I go to the beater and handle and feel this pulp that is manual labour—you may call it that—but it is not the kind of thing to which anyone ought to object.

*Mr. Bhargava.*—Even filling the beater is not necessarily a thing which anybody should object to.

*Mr. Ginwala.*—Why should you fill the beater in order to learn the chemical changes?

*Mr. Bhargava.*—For one thing, if a man wanted to be in the position of a foreman, he must know all the difficulties a task involves, and unless he does it he cannot know it. How can he expect to teach others unless he has done it himself?

*Mr. Ginwala.*—What I wanted to know was how was it essential for securing the technical knowledge of the processes that you should carry the material yourself and put it into the beater?

*Mr. Raitt.*—It will be brought to the beater by the truck; then you will have to lift it out of the truck and put it in the beater.

*Mr. Ginwala.*—Why cannot the man who brings it put it into the beater?

*Mr. Raitt.*—Because no man is available. If you want another man the manager will say "why don't you do it?"

*Mr. Ginwala.*—It seems to me to be a very expensive way of doing manual work.

*Mr. Bhargava.*—I do not mean that you ought to employ the apprentice permanently on the job.

*Mr. Ginwala.*—I do not understand why you should fill it yourself to know what takes place in the beater.

*Mr. Bhargava.*—Not only for that.

*Mr. Ginwala.*—You only want to know what is taking place in the beater?

*Mr. Bhargava.*—Not only that. One ought to know everything that is going on in the mill and what the workmen have got to do, and there is the question of filling the beater. Suppose a man does not know how much stuff is to be put into the beater, and he orders the beater man who is generally illiterate, he might spoil the whole thing. Besides the technical and scientific side of it there are other small items in the management and administration of it.

*Mr. Ginwala.*—Can you give another illustration of what an educated man would not like to do and you had to do?



*Mr. Bhargava.*—I did not mean that an educated man would not like to do it and I did it. I only meant the general dislike for manual work no matter what nature of work it is.

*Mr. Ginwala.*—How much manual work is involved in this?

*Mr. Bhargava.*—As a matter of fact, if I were to go to a pulp mill to learn the art of pulp making, I should do every little work there from the beginning, beating of grass, crushing of bamboos right down to the bleaching of it.

*Mr. Ginwala.*—You have taken a Science degree, and you want to know the chemical part of the processes: your main purpose is to learn the chemical part of the work?

*Mr. Bhargava.*—If a man wanted to specialise in the chemical part of it it is not very necessary.

*Mr. Ginwala.*—What were you qualifying for?

*Mr. Bhargava.*—I was qualifying for the post of manager of a mill ultimately.

*Mr. Ginwala.*—I am not talking of the manager's work. In the pulp mill you wanted to learn the pulp making merely and I wished to know how much manual work was involved?

*Mr. Bhargava.*—I do not quite understand, because it is all practically manual work except the chemistry of it.

*Mr. Raitt.*—The other side of it is to know how much work is a cooly expected to do. No one will realise the work of a cooly, and co-ordinate it with that of the other workers, unless he has some experience of doing that work himself. Then he can very accurately determine what each cooly will have to do.

*Mr. Ginwala.*—That is to say, in order to be able to know what amount of manual work will have to be extracted from people who are doing manual work the manager must do the manual work himself. If that is so, I entirely agree with you, but I did not agree with your principle.

You had no difficulty in obtaining your training in England?

*Mr. Bhargava.*—It was with great difficulty that I could get admission into the John Dickinson Mill. Professors of the College tried for me but unfortunately they were unsuccessful, and then Mr. Raitt happened to be there and I met him there and he corresponded with several firms. Afterwards he went to the Indian Educational Adviser and urged him on to write to the Controller of Stationery to write to one of the firms who supplied paper to the Government, and the Controller of Stationery wrote to John Dickinson's and they took me in their mill, and then of course through the kindness of John Dickinson's I got into other mills.

*Mr. Ginwala.*—But once you got there, had you any difficulty in having access to the different processes?

*Mr. Bhargava.*—Not at all. They were exceptionally good to me. Of course there were one or two processes which they considered secret, and there I was not allowed to go. That did not concern either pulp or paper making.

*Mr. Ginwala.*—In the other works at Exeter did you have the same facilities?

*Mr. Bhargava.*—Yes. I was given, so to say, a blank card to go wherever I liked and to work in whichever department I liked.

*Mr. Ginwala.*—Did you study their costing system in any of these places?

*Mr. Bhargava.*—I was not allowed to do that.

*Mr. Ginwala.*—That is one of the most important parts of the training.

*Mr. Bhargava.*—I do not think that any firm would allow any foreigner to learn their costing system.

*Mr. Ginwala.*—I was simply asking you whether they did.

*Mr. Bhargava.*—No.

*Mr. Ginwala.*—In Germany did you have the same facilities?

*Mr. Bhargava.*—Yes. I went to the firms in Germany through Messrs. J. M. Voith Heidenheim and they arranged for me in two mills in Germany.

*Mr. Ginwala.*—How long did you stay there?

*Mr. Bhargava.*—Four months.

*Mr. Ginwala.*—Can you give us any idea from your knowledge of the conditions in Lucknow and your experience of Dickinson's and in Germany, whether you consider that conditions in India are such that eventually it may be possible for India to compete with these countries?

*Mr. Bhargava.*—Eventually I think we can.

*Mr. Ginwala.*—I am speaking of the raw materials and the conditions of labour.

*Mr. Bhargava.*—If the conditions are favourable I do not see why we should not.

*Mr. Ginwala.*—Would it be possible for India to do only with Indian supervision—expert supervision—and Indian labour?

*Mr. Bhargava.*—I am afraid not just now. But I believe in a few years' time it may be possible to train Indians, in say 5 to 10 years' time.

*Mr. Ginwala.*—That is not a very long time. We were told that it takes from father to son to learn paper-making and pulp making. If that was so, India must wait for a generation to learn this work.

*Mr. Bhargava.*—That is true to a certain extent, but there are Indian workmen in the Lucknow paper mills, Bengal Paper Mills and other places. For the machine operators it will take some time to train them. I do not consider it so very complicated as to take one full generation to learn it.

*Mr. Ginwala.*—It was represented to us that you should begin at 15 years if you were to learn the work properly. With the system of education in the country it would not be possible for any young man to begin at that age. for he won't have the requisite knowledge. Has the fact that you did not start at 15 been a handicap to you?

*Mr. Bhargava.*—It is so as far as the technicality of paper-making goes. Of course with my education I could pick up things more quickly than perhaps a lad of 15 would, but in the skill which is required in handling machinery and for making the paper I was certainly at a disadvantage. For instance, the running of a paper machine does not require so much of intelligence as of practice.

*Mr. Ginwala.*—You agree with the opinion expressed that it will take a very long time before India can do without expert foreign supervision?

*Mr. Bhargava.*—That is not exactly what I mean. As regards supervision, that does not require so much of skilled practice as a proper training, not only scientific training in the art but also training in the administration, and for that I consider about 10 years should do if they take to it wholeheartedly.

*Mr. Kale.*—Am I to understand that there is a growing tendency among educated Indians to take to what you call manual work in factories? Is that your experience?

*Mr. Bhargava.*—I think so.

*Mr. Kale.*—Is it your view that there has been some prejudice in the minds of few employers against educated Indians, that is to say, even if they were fit to take up a certain job they were not willing to entrust the job to educated Indians under the impression that they would not do?

*Mr. Bhargava.*—After receiving training at the college they may be theoretically fit for the work but they are not, and the employers are justified to that extent. But I consider that employers are not justified in not giving an opportunity to educated Indians to pick up the work.

*Mr. Kale.*—There is the charge that they are not prepared to take their coats off?

*Mr. Bhargava.*—There is something in that charge. It has not entirely gone but it is going away very rapidly.

*Mr. Perree.*—There should be some careful selection to avoid the objection that may be made that they did not get the right men. The manager of the mill does not want men to be loafing about in the place. He wants a man who is ready to take his coat off and do his work. The difficulty is to interpose a central authority who can deal with the whole demand.

*Mr. Kale.*—But the Local Government or the Director of Industries might make the selection.

*Mr. Perree.*—He might put in his brother. That is the danger.

*President.*—I do not think there will be any difficulty in getting into factories men nominated as State scholars by the Local Government who are receiving stipends. The difficulty is whether the mills would take men and pay them.

*Mr. Perree.*—There will be no difficulty in getting these boys into factories provided they are vouched for, and there must be some rigid system of control.



सत्यमेव जयते

## Witness No. 19.

**Messrs. John Dickinson & Company, Limited, Calcutta.**

**A.—WRITTEN.**

*Original representation of Messrs. John Dickinson and Company, Limited, Calcutta, dated 24th June, 1924.*

We have to thank you for your wire sent in answer to our G. M. 313—873 of the 13th June.

We would like first to place on record our great appreciation of your courtesy in giving us the opportunity of expressing our views at this stage of the enquiry and we submit the outline of our position as follows:—

(1) Paper-making is an industry requiring specialised technical knowledge and the maintenance of a satisfactory supervisory staff is a matter of great difficulty to every concern.

Owing to the want of technical Colleges and Universities, India cannot hope to find the necessary staffs adequately to equip new mills for many years to come.

The extension of technical and vocational education should precede a policy for protection of the industry in the hope of arbitrary extension under artificial conditions.

(2) Paper is the cheapest manufactured commodity and universal experience has proved that many factors enter into the successful prosecution of the industry.

Unless at the point of manufacture favourable conditions in respect of—

- (1) Materials,
- (2) Fuel,
- (3) Power,
- (4) Water,
- (5) Transport to market,
- (6) Proximity to market,

are all present, a paper enterprise almost invariably ends disastrously.

(3) Under existing conditions the locally produced paper already enjoys a protective tariff as heavy as that assessed in most countries employing a declared protectionist policy.

The existing tariff is 15 per cent. and the practice of assessing duty upon the market price of the paper, gives the equivalent of a tariff of roughly 25 per cent. on the cost of the imported paper.

(4) Owing to the special conditions aforementioned governing the possibility of profitable manufacture, the area in which developments can take place is a comparatively small one.

India is a large country and railway freights on a cheap commodity like paper affect its price considerably, hence the operations of a mill tend to become localised.

The result of the imposition of a protective duty would be to penalise those areas situated remote from the place of manufacture without opening up to them the opportunity of a wider use of local paper.

This is the experience of all countries of "Magnificent distance" under any industry.

(5) With the growth of democratic ideas in India, the demand for an extension of education, and in particular Elementary general education, will become more and more vocal.

The present prices of paper are already roughly 100 per cent. over pre-war levels and for all classes of the community, the provision of educational

literature, exercise books and other requisites needed in the education of their children is already a pressing item in the family budget.

The present need of the country is not for dearer but for cheaper paper.

(6) Paper is already beyond the pocket of 90 per cent. of the people and the average annual consumption per head of the population in India is only  $\frac{1}{4}$  lb.

In Great Britain it is over 50 lbs. per head of the population and even in the most backward countries in Europe, the consumption exceeds 10 lbs. per head of the population.

The cost of paper in the Government Administration has assumed such serious proportions that Government Offices are actually being instructed to use the same envelope 2 and 3 times over, and the most rigid economy is being exercised because freedom of use is impossible until prices are reduced.

(7) Any appreciable increase in the market price of paper will seriously threaten the prosperity of the majority of the Newspaper enterprises in the country; already they are compelled to purchase the very cheapest class of Continental paper in order to avoid bankruptcy.

No Indian mill is equipped at present to supply a satisfactory News Print.

(8) The existing Indian mills cannot manufacture the cheapest paper used by the common people nor the better class of papers in general use for commercial and private correspondence.

In spite of the declared policy of preference for Indian manufactures, the Indian Government and also the Provincial Governments have to procure the major portion of their requirements in England or on the Continent of Europe, owing to the inability of the Indian mills to manufacture more than a very confined range of qualities.

Practically all the better class papers employed in demi-official correspondence in Government Offices are imported and the printing qualities of the locally produced paper are so poor that for any jobs outside ordinary forme work, the Press Superintendents insist on being supplied with imported paper.

Practically all the printed matter that passes through the hands of the poorer classes, such as Almanacs, Religious Epics, Novels, etc., is produced from News Print and an increase in the price invariably results in a marked diminution in the demands; the consumers cannot afford to pay an increased cost.

(9) The existing Indian mills cannot make more than 40 per cent. of to-day's consumption and with the spread of education the demand is growing.

(10) An increase in the cost of paper would seriously handicap the Printing Industry which is one of the most important in the country and is at present in a most critical condition.

Owing to the increased costs, high class publications and advertising issues by business houses have been almost entirely suspended and the tendency in all directions is to divert consumption on to cheaper lines.

(11) The inter-dependence of paper with the allied industries of Printing and Publishing will make the imposition of a protective duty on paper operate very disadvantageously to both the Printer and the local Publisher.

The Printer will be seriously handicapped in competition with the Foreign Printer who at present captures a large percentage of the better class trade and unless it is proposed to associate with the paper duty a protective duty on printed books—a policy which has been definitely rejected in every protected country throughout the world—there will be grave danger of a transfer of much of the publishing trade to other countries.

This is a danger peculiar to India where so much of the vernacular printing was first done Overseas by Missionary Societies and Philanthropic bodies.

No. 20.

**Mr. C. M. GOPAL.***Letter from Mr. C. M. Gopal, Madras, dated the 7th July 1924.*

I am forwarding herewith my correspondence with certain paper mills of this country which will show you that they are extremely unwilling to admit apprentices in their mills.

At my instance Mr. T. Rengachariar put a question (in the First Reforms Assembly) asking Government if they require the Indian paper mills with whom they place large contracts to undertake to train young Indians in the industry. The reply of the Government was that they require no such undertaking, but will consider the matter.

As nothing has so far been done I suggest that before granting any protection to the industry the Tariff Board should require the mills to make arrangements to give a course of apprenticeship to young Indians who are qualified for the same.

Kindly return the correspondence when done with.

Thanking you in anticipation.

Enclosure No. I.

*Copy of a letter from the Managing Agents, Bengal Paper Mill Company, Limited, Calcutta, dated the 17th October 1922, to Mr. C. M. Gopal, 5, Marshall's Road, Egmora, Madras.*

We are in receipt of yours of the 12th instant, with reference to your application for a course of training in our paper mills.

We regret that we are unable to accede to your request as all the posts for apprenticeships are full and we cannot accept any further applicants for a very considerable period.

Enclosure No. II.

*Copy of a letter from the Managing Agents, the Titaghur Paper Mills Company, Limited, Calcutta, dated the 29th November 1922, to Mr. C. M. Gopal, Madras.*

We have your application of 22nd instant and note that you wish to obtain a knowledge of paper factory method and routine and therefore wish to be apprenticed in our mills some time next year.

We have at present no apprenticeship system, but will keep your name before us. Please say \* if you are prepared to serve for a period of five years.

Enclosure No. III.

*Copy of a letter from the Managing Agents, the Titaghur Paper Mills Company, Limited, Calcutta, dated the 18th December 1922, to Mr. C. M. Gopal, Madras.*

We herewith acknowledge receipt of your letter of the 11th instant, but regret to inform you that we have no vacancy at the moment.†

We are herewith returning your photograph.

\* My reply was that I was quite prepared to serve for a period of five years and was willing to join at once.

† Subsequent communications (4 in number) to the firm have failed to evoke any reply.

C. M. GOPAL.

## Enclosure No. IV.

*Copy of a letter from the Manager, the Meenakshi Paper Mills Company, Punalur, dated the 31st August 1923, to Mr. C. M. Gopal, Madras.*

With reference to your letter of the 28th instant, we have no objection to take apprentices provided they undertake \* to work in the factory for at least two years keeping up to factory time and attendance. The apprentices should make their own arrangements for their stay at Punalur.

## Enclosure No. V.

*Copy of a letter from the Manager, the Meenakshi Paper Mills Company, Punalur, dated the 11th September 1923, to Mr. C. M. Gopal, Madras.*

In reply to your letter of the 9th instant, we have to inform you that we propose to take in apprentices only in January next.

## Enclosure No. VI.

*Copy of a letter from the Manager, the Meenakshi Paper Mills Company, Punalur, dated the 15th December 1923, to Mr. C. M. Gopal, Madras.*

In reply to your letter of the 10th instant, we have to inform you that we are too busy † at present to take apprentices.

## Enclosure No. VII.

*Copy of a letter from the Manager, the Meenakshi Paper Mills Company, Punalur, dated the 25th December 1923, to Mr. C. M. Gopal, Madras.*

With reference to your letter of the 16th December, there is no convenience for you to stay in the mills. If you can make your own arrangements‡ for you stay outside, we have no objection to take you in as an apprentice.

## Enclosure No. VIII.

*Copy of a demi-official letter from the Director, Central Bureau of Information, Simla, No. 4735, dated the 10th November 1922, to Mr. C. M. Gopal, Madras.*

Your letter of 4th November 1922, regarding the annual supply of paper from mills in India, etc., has been transferred to the Department of Industries, Delhi, for favour of disposal. Will you kindly address that Department in future.

\* Please note the succeeding letter in reply to mine giving the above undertaking.

† If this plea was genuine how were they able to send the next letter after ten days?

‡ On my arrival at the Mill I was turned back upon a silly excuse.

C. M. GOPAL.

Enclosure No. IX.

*Copy of a letter from the Assistant Secretary to the Government of India, Department of Industries, Delhi, No. 1-70 (T), dated the 30th November 1922, to Mr. C. M. Gopal, Madras.*

I am directed to say that your letter, dated the 4th November 1922, on the above subject, has been transferred to the Director of Industries, Madras, for disposal.

Enclosure No. X.

*Copy of a letter from the Director of Industries, Madras, No. 843-A-22, dated the 9th December 1922, to Mr. C. M. Gopal, Madras.*

With reference to your letter dated the 4th November 1922, addressed to the Director, Central Bureau of Information, Delhi, and transferred to me for disposal, I write to say that the reply to your first question, viz., whether the Government of India obtains any part of its annual paper supply from mills in India is in the affirmative. The value of the purchases thus made varies according to the requirements of the consuming Departments and price of paper. In 1920-21, the value of paper purchased from Indian mills for the Government of India and Local Governments was Rs. 75 lakhs, while in 1921-22 the purchases amounted to approximately Rs. 90 lakhs.

2. The answer to your second question \* is in the negative.

3. I regret that information is not available in regard to the apprentices, if any, employed in paper mills.

Enclosure No. XI.

*Copy of a letter from the Director of Industries, Madras, No. 335-A-24, dated the 16th April 1924, to Mr. C. M. Gopal, Madras.*

With reference to your letter dated the 8th April 1924, I return herewith the papers you left with me. From enquiries instituted, I understand that the † Carnatic Paper Mills have no intention at present of taking apprentices. I have not so far heard from the Meenakshi Paper Mills, Punalur on the subject. They are being reminded and I will communicate with you further on receipt of their reply.

\* Viz., Whether the Government makes it a condition that the mills shall receive Indian young men as apprentices in return for diverting the contracts to them.

† And yet the mill applied to the Government of Madras for a loan of Rs. 1 lakh under the State Aid to Industries Act.

C. M. GOPAL.